DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 217

[Docket No. 200106–0003]

RIN 0648–BJ24

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Ice Roads and Ice Trails Construction and Maintenance Activities on Alaska's North Slope

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Proposed rule; request for comments and information.

SUMMARY: NMFS has received a request from Hilcorp Alaska, LLC (Hilcorp) and Eni US Operating Co. Inc. (Eni) for authorization to take small numbers of marine mammals incidental to ice road and ice trail construction, maintenance, and operation in Alaska's North Slope, over the course of five years (2020–2025). As required by the Marine Mammal Protection Act (MMPA), NMFS is proposing regulations to govern that take and requests comments on the proposed regulations. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorization and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than February 18, 2020.

ADDRESSES: You may submit comments, identified by NOAA–NMFS–2019–0129, by any of the following methods:

- *Electronic submissions:* submit all electronic public comments via the Federal eRulemaking Portal, Go to *www.regulations.gov/#!docketDetail;D=NOAA-NMFS-2019-0129,* click the ''Comment Now!'' icon, complete the required fields, and enter or attach your comments.
- *Mail:* Submit comments to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910–3225.

Instructions: Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered by NMFS. All comments received are a part of the public record and will generally be posted for public viewing on *www.regulations.gov* without change. All personal identifying information (*e.g.,* name, address, etc.), confidential business information, or otherwise sensitive information submitted voluntarily by the sender may be publicly accessible. Do not submit Confidential Business Information or otherwise sensitive or protected information. NMFS will accept anonymous comments (enter ''N/A'' in the required fields if you wish to remain anonymous). Attachments to electronic comments will be accepted in Microsoft Word, Excel, or Adobe PDF file formats only.

FOR FURTHER INFORMATION CONTACT: Shane Guan, Office of Protected Resources, NMFS, (301) 427–8401. Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online at: *https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act.* In case of problems accessing these documents, please call the contact listed above.

SUPPLEMENTARY INFORMATION:

Purpose and Need for Regulatory Action

This proposed rule would establish a framework under the authority of the MMPA (16 U.S.C. 1361 *et seq.*) to allow for the authorization of take of marine mammals incidental to Hilcorp and Eni's ice roads and ice trails construction and maintenance activities on Alaska's North Slope.

We received an application from Hilcorp and Eni requesting five-year regulations and authorization to take ringed seals. Take would occur by Level B, Level A harassment and serious injury and/or mortality of a few individual seals incidental to ice roads and ice trails construction and maintenance. Please see ''Background'' below for definitions of harassment.

Legal Authority for the Proposed Action

Section 101(a)(5)(A) of the MMPA (16 U.S.C. 1371(a)(5)(A)) directs the Secretary of Commerce to allow, upon request, the incidental, but not intentional taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region for up to five years if, after notice and public comment, the agency makes certain findings and issues regulations that set forth permissible methods of taking pursuant to that activity and other means of effecting the ''least practicable adverse impact'' on the affected species or stocks and their habitat (see the discussion below in the ''Proposed Mitigation'' section), as well as monitoring and reporting requirements. Section 101(a)(5)(A) of the MMPA and the implementing regulations at 50 CFR part 216, subpart I provide the legal basis for issuing this proposed rule containing five-year regulations and for any subsequent letters of authorization (LOAs). As directed by this legal authority, this proposed rule contains mitigation, monitoring, and reporting requirements.

Summary of Major Provisions Within the Proposed Rule

Following is a summary of the major provisions of this proposed rule regarding Hilcorp and Eni's construction activities. These measures include:

- No initiation of ice road or trail construction if a ringed seal is observed within 150 ft of the action area after March 1 through May 30 of each year.
- Requiring monitoring of the construction areas to detect the presence of marine mammals before beginning construction activities.

Background

The MMPA prohibits the ''take'' of marine mammals with certain exceptions. Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed incidental take authorization may be provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for taking for subsistence uses (where relevant). Further, NMFS must prescribe the permissible methods of taking and other ''means of effecting the least practicable adverse impact'' on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stocks for taking for certain subsistence uses (referred to in shorthand as

''mitigation''); and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth.

The definitions of all applicable MMPA statutory terms cited above are included in the relevant sections below.

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and NOAA Administrative Order (NAO) 216–6A, NMFS must review our proposed action (*i.e.,* the issuance of an incidental harassment authorization (IHA)) with respect to potential impacts on the human environment.

Accordingly, NMFS is preparing an Environmental Assessment (EA) to consider the environmental impacts associated with the proposed rule.

NMFS' draft EA is available online at *https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act.*

We will review all comments submitted in response to this document as we complete the NEPA process, prior to making a final decision on the incidental take authorization request.

Summary of Request

On December 2, 2018, NMFS received a joint application from Hilcorp and Eni requesting authorization for take of marine mammals incidental to construction activities related to ice roads and ice trails in the North Slope, Alaska. The requested regulations would be valid for five years, from February 15, 2020, through February 14, 2025. Hilcorp and Eni plan to conduct necessary work, including use of heavy machinery on ice, to facilitate access to North Slope offshore oil and gas facilities. The proposed action may incidentally expose marine mammals occurring in the vicinity to elevated levels of sound, human presence on ice habitat, and interactions with heavy machinery, thereby resulting in incidental take, by Level B harassment and serious injury or mortality. NMFS provided questions and comments to Hilcorp and Eni after receiving the initial application regarding the scope of the project and impact analysis. Hilcorp and Eni submitted a modified request on May 21, 2019 and NMFS deemed the application adequate and complete on May 31, 2019.

Description of Proposed Activity

Overview

Hilcorp and Eni conduct oil and gas operations at Northstar Production Facility (Northstar) and Spy Island Drillsite (SID), respectively, in coastal Beaufort Sea, Alaska. During the ice-covered season, Hilcorp constructs annual ice roads and trails to connect and allow access between West Dock and Northstar. Similarly, Eni builds and utilizes an ice road connecting the Oliktok Production Pad (OPP) and SID. Eni also builds an annual ice road from shore to the Oooguruk Drill Site (ODS) (Figures 1–4). This regulation and the implementing LOAs would authorize takes of marine mammals incidental to Hilcorp and Eni's ice roads and ice trails construction during the ice-covered season on Alaska's North Slope.

Dates and Duration

Both Hilcorp and Eni generally begin constructing sea ice roads and ice trails as early as possible, usually by late December depending on weather. Maintenance and use of the ice roads and trails continue generally through mid-May when the ice becomes too unstable to access. Depending on the weather, from the initial surveying until the ice is thick enough to allow travel by wheeled vehicles, ice road construction takes about six weeks.

Specific Geographic Region

Northstar, an artificial gravel island, is located in State of Alaska coastal waters about 9.7 km (6 mi) offshore from Point Storkersen in the Beaufort Sea (Figure 1). Water depth at the island is about 12 ft (39 ft). This region is covered by landfast ice in winter and with water depths greater than 3 m (10 ft) .

The 0.05 square kilometer [km^2] (11-acre) SID is also an artificial, gravel island constructed in shallow (1.8–2.4 m, 6–8 ft), State of Alaska coastal waters approximately 4.8 km (3 mi) north of Oliktok Point and just south of the Spy Island barrier island (Figure 2). While SID is situated in water depths considered unsuitable for ringed seals, each year a crack or lead has developed in the road between OPP and SID.

The ODS consists of a 0.024 km^2 (6-acre) gravel drillsite approximately 8 km (5 mi) offshore in 1.4 m (4.5 ft) of water (Figures 3 and 4). The site is connected to an onshore facility by a flowline system consisting of a 9.2 km (5.7 mi) subsea buried flowline bundle which transitions onshore to a 3.7 km (2.3 mi) traditional North Slope aboveground flowline support system.

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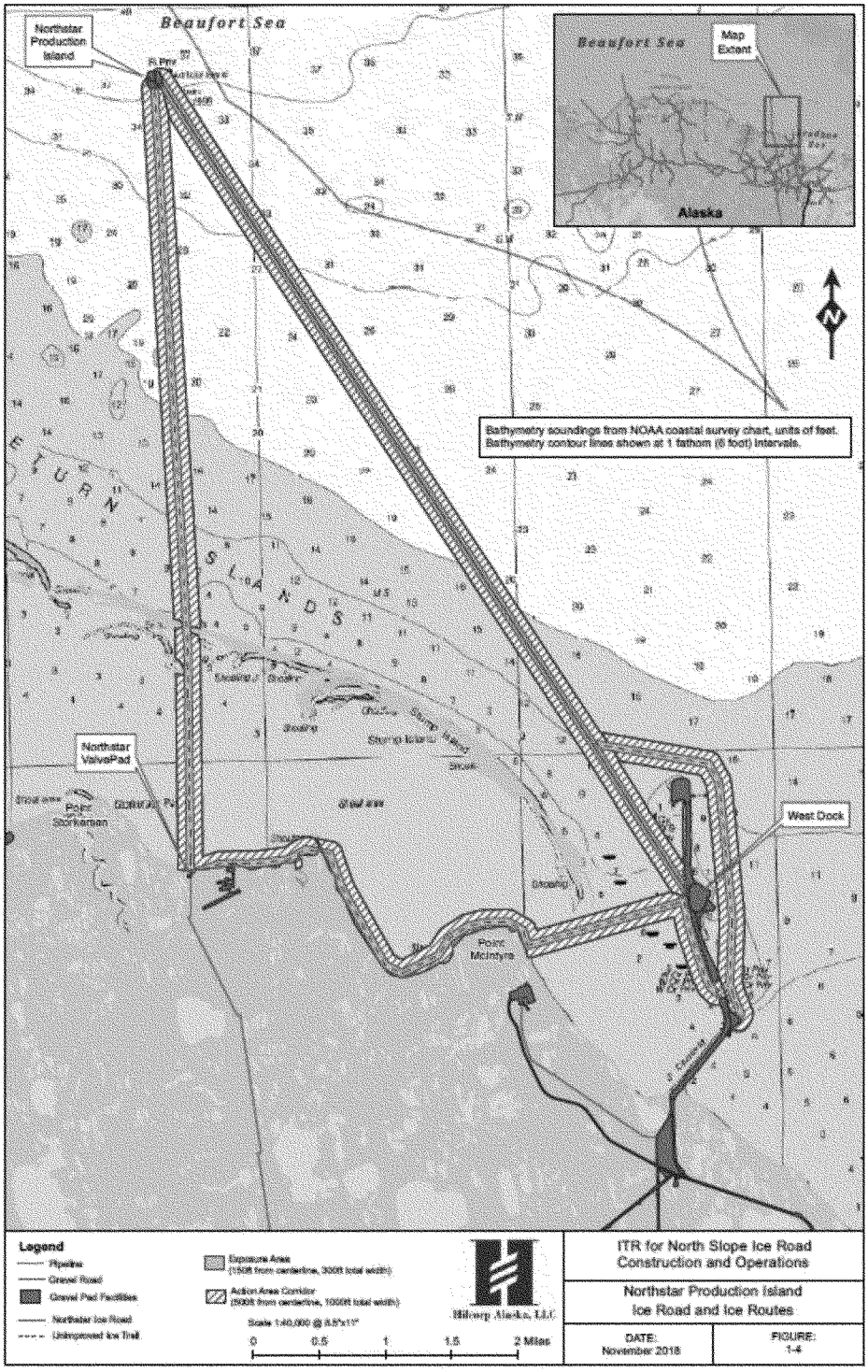

Figure 1. Northstar Production Island Ice Road and Ice Trails

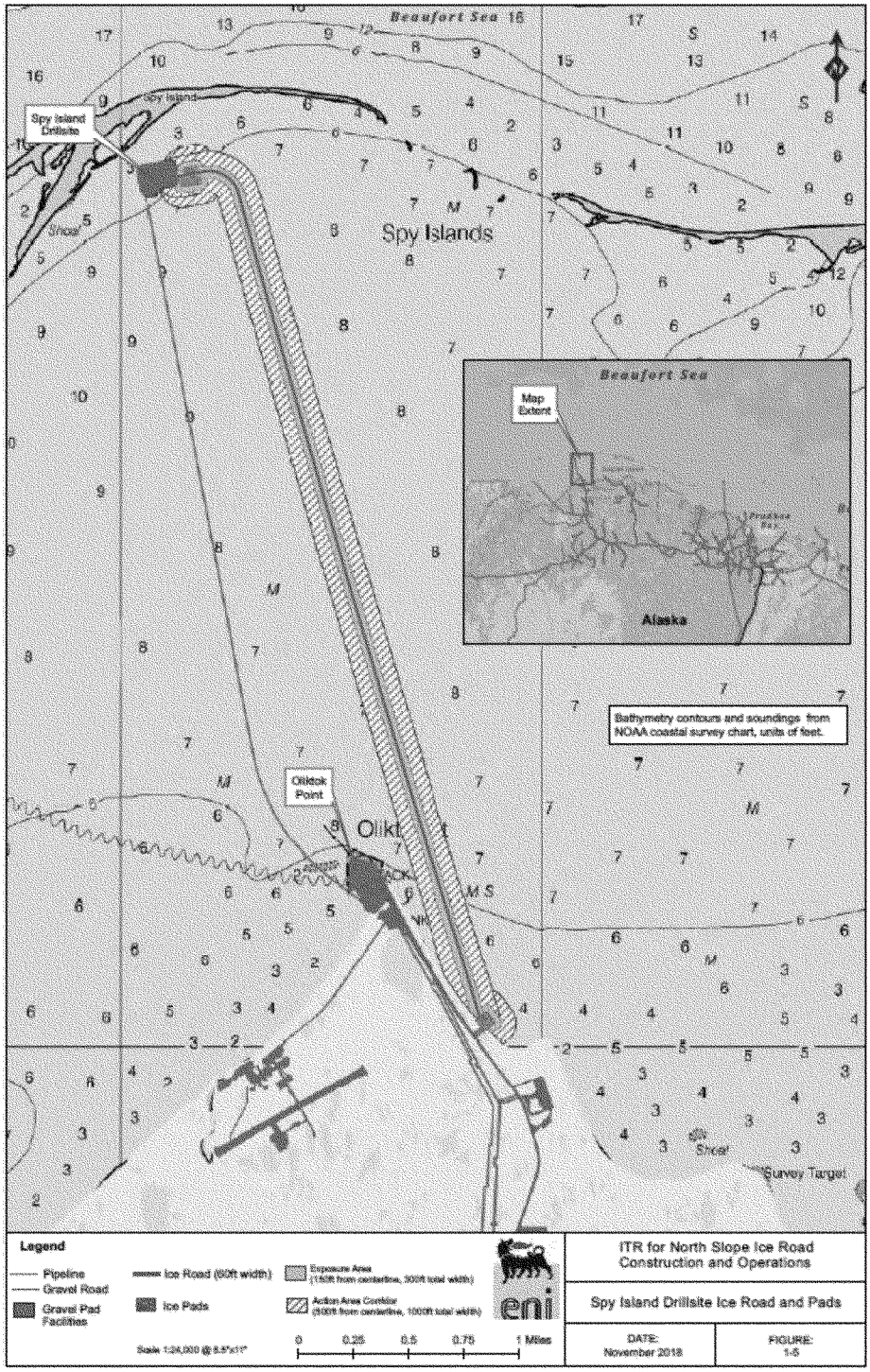

Figure 2. SID Ice Road/Trail and Ice Pads

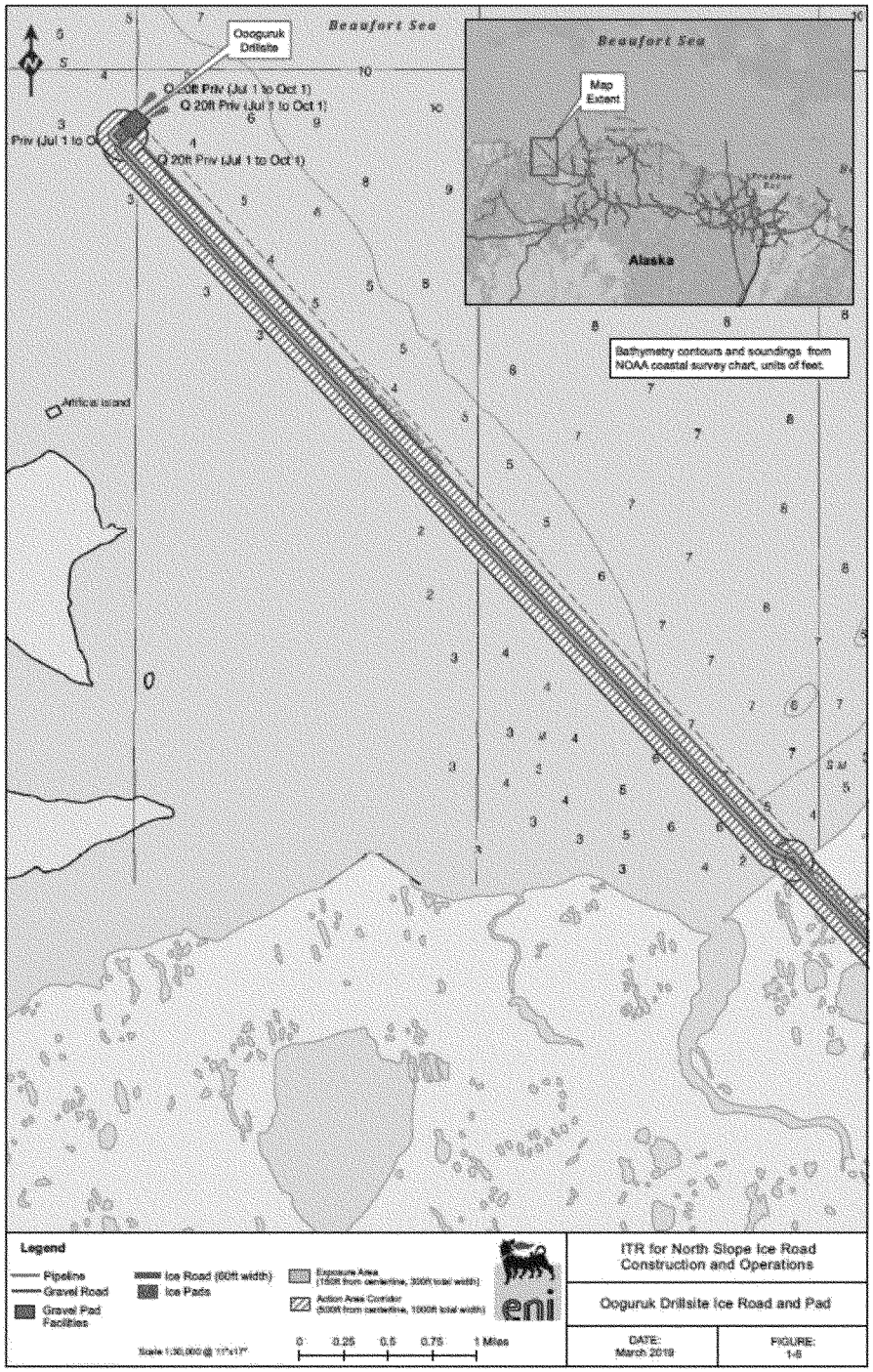

Figure 3. Oooguruk Ice Road

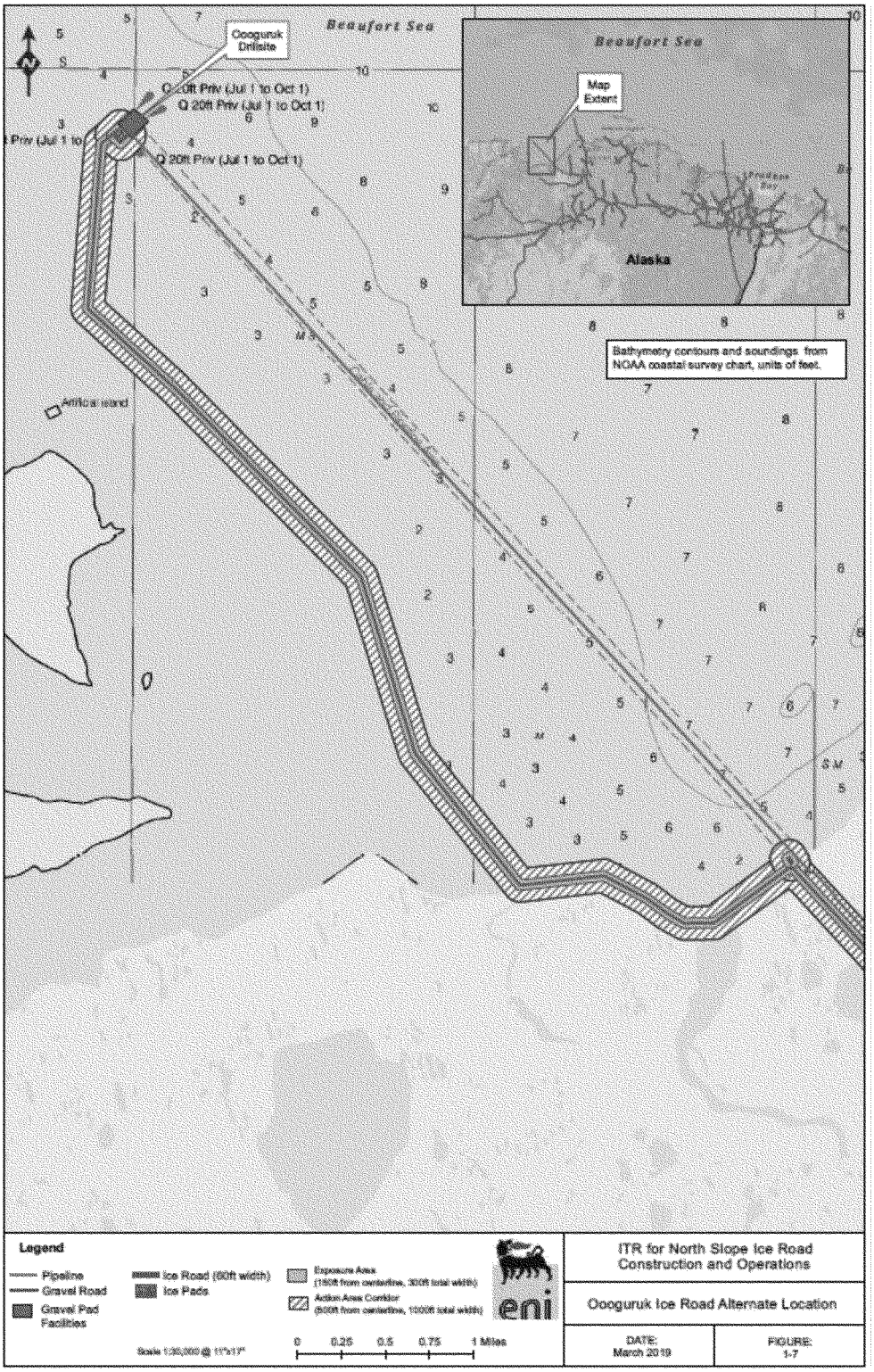

Figure 4. Oooguruk Ice Road Alternate Location

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Detailed Description of Specific Activity

Hilcorp: Northstar to West Dock

Ice Road Construction, Use, and Maintenance

Each year during the ice-covered season an approximately 11.7 km (7.3 mi) long ice road is constructed between Northstar and the Prudhoe Bay facilities at West Dock to transport personnel, equipment, materials, and supplies (Figure 1). Ice roads allow standard vehicles such as pick-up trucks, SUVs, buses and other trucks to be used to transport personnel and equipment to and from the island during the ice-covered period.

In some years depending on operational needs and weather conditions, Hilcorp may elect to not build the main improved ice road. In this case, a primary ice trail that can support only tracked, lighter-weight vehicles would be built in the location of the improved ice road shown on Figure 1. However, to cover all scenarios, Hilcorp assumes that an ice road would be built in each year for the next five years.

In water deeper than 3 m (10 ft), the ice must be approximately 2.4 m (8 ft) thick to support construction equipment. Ice road construction activities occurs 24 hours a day, 7 days a week during the construction phase and are only halted in unsafe conditions such as high winds or extremely low temperatures. The ice roads are typically constructed by specially-designed pumps with ice augers. Seawater for creating the offshore ice road is obtained by drilling holes through the existing sea ice using augers and pumping salt water to flood the ice surface. The rolligons (vehicles with large low-pressure tires) move along the road alignment while flooding the surface. Water trucks are used to spray a freshwater cap over the thickened sea ice to provide durability.

Following construction, ice road surfaces are maintained using graders with snow wings and blowers, or front-end loaders with snow blower attachments. Snow can also be cleared by personnel with snow blowers. When snow blowing, wind direction is used to assist in dispersing the blown snow over a large area so that large berms or piles are not created. Delineators may be used to mark the roadway in 15 m (50 ft) increments down the centerline of the road, and at no more than 0.4 km (¼ mi) increments on both sides of the ice road to delineate the path of vehicle travel and areas to be maintained. Corners of rig mats, steel plates, and other materials used to bridge sections of hazardous ice, are clearly marked or mapped using Global Positioning System (GPS) coordinates of the locations.

The following steps are used to build the Northstar ice road:

- Clear snow using lighter-weight tracked vehicles;
- Grade or drag the ice to smooth the surface, incorporating rubble ice into the road or moving it outside of the expected road surface;
- Drill holes through floating ice along the planned ice road route using rolligons equipped with ice augers and pumps;
- Pump seawater from drilled holes over floating ice; and
- Flood the ice road. Flooding techniques are dependent on the conditions of the sea ice (*i.e.,* grounded vs. floating).

Grounded ice requires minimal freshwater flooding to either cap or repair cracks. Floating ice requires flooding with seawater until a desired thickness is achieved. Thickness of floating ice would be determined by the required strength and integrity of the ice. After achieving desired thickness, floating ice areas may then be flooded with fresh water to either cap or repair cracks. This technique minimizes the amount of freshwater used to obtain the desired thickness of the ice road. Hilcorp would use permitted freshwater sources if fresh water is needed to construct the Northstar ice roads. Water would be transported by truck from permitted freshwater sources via existing roads.

Ice Trails

Ice trails are unimproved access corridors used by Tuckers (a type of tracked vehicle that moves on snow), PistenBullys® (a type of tracked vehicle that moves on snow), snow machines, or similar tracked equipment. Seawater flooding of the entire trail and freshwater caps are not used. However, small rough areas of a trail may require minimal seawater flooding to allow tracked vehicles, rolligons, and the hovercraft (if needed) to travel along the corridor.

To construct the trail, snow machines and light-weight tracked vehicles are used to initially mark the corridor as soon as it is determined to be safe for access. Sea ice in the unimproved roads would be allowed to thicken through natural freeze up as the ice, and snow is packed down by larger tracked vehicles. Generally, snow removal or large surface modifications are not required for ice trails.

Hilcorp usually builds the following unimproved ice trails to Northstar:

- Along the pipeline corridor from the valve pad near the Dew Line site to Northstar (9.5 km, 5.93 mi),
- From West Dock to the pipeline shore crossing (grounded ice along the coastline (7.8 km,4.82 mi), and
- Two unimproved ice road paths from the hovercraft tent at Dockhead 2. One would go under the West Dock causeway bridge to Dockhead 3 (1.4 km, 0.86 mi) and the other would go around West Dock and intersect the main ice road north of the Seawater Treatment Plant (4.6 km, 2.85 mi).

In addition to these trails, Hilcorp may need to construct several shorter length trails into undisturbed areas to work around unstable and unsafe areas of ice as the season progresses. Due to safety considerations these work-around or detour trails may need to be constructed after March 1st. They are constructed similarly to the planned ice trails and are not flooded or capped with seawater or freshwater. Typically, these detours deviate approximately 23 to 46 m (75 to 150 ft) from the original road or trail to allow crews to safely go around soft spots or cracks.

Eni: Oliktok Production Pad to SID

Ice Road Construction, Use, and Maintenance

Each year Eni builds a single ice road and three ice pads. The ice road extends 6.8 km (4.2 mi) offshore from OPP to SID (Figure 2). This ice road has both supported on water (floating) and grounded ice sections; the first 244 m (800 ft) of the road from shore is grounded ice (*i.e.,* frozen to the bottom). In addition, Eni typically also builds two floating ice pad parking areas at SID: A 152 m by 6 m (500 ft by 200 ft) area located on the southeast side of SID, and a 91 m by 46 m (300 ft by 150 ft) area on the northeast side, and one grounded ice pad at the Oliktok Point end of the ice road.

Initial construction of the sea ice road begins with surveying and staking the route as soon as the ice is thick enough to support snow machines. The floating sections of the road are constructed using the free flood method; low pressure pumps flood the ice surface with seawater. A 7. 6 cm (3 in.) layer of water is applied, some of which may move to lower parts of the roadway. After the water has frozen, the next flood can be applied.

Small rolligon vehicles with augers and pumps are used for augering and flooding. Hand augers can be used to check the ice thickness. Ice needs to be 41 to 51 cm (16 to 20 in.) thick to support these vehicles. Rolligon tires distribute the load over a larger tire

print. Flooding operations occur 24 hours a day, 7 days a week during this phase. Once the ice is about 183 cm (72 in.) thick and determined to be able to support full loads, vehicles such as passenger trucks, vacuum trucks, drill trucks and other tractor plus trailer loads can use the ice road. Up until that time, only rolligon vehicles and tracked vehicles are used on the road. The maintained ice road width (including the shoulder areas) is 49 m (160 ft).

Rig mats are used to bridge small leads (fractures within large expanse of ice) and wet cracks during construction and maintenance. During maintenance activities, fresh water is used for road surfacing and repair. Once fully flooded and open to traffic, snow loads on the ice road must be managed. Snow on the ice road is cleared frequently and the width of the ice road (including the shoulder areas) is maintained at 49 m (160 ft). At the end of the ice road season, as temperatures and sun exposure increase, snow may be spread over the road surface to insulate and shade the ice surface, helping to preserve ice road integrity.

Ice Trails

Following the same general construction methods used at Northstar, Eni plans to build an unimproved ice trail just west of and parallel to the sea ice road corridor near SID. The ice trail is typically approximately 15–30 m (50–100 ft) west of the western edge of the ice road shoulder and is used when the ice road is being constructed. Once the ice road is open to regular traffic, the ice trail is not used. After March 1st, due to safety considerations, Eni may also need to use several shorter length trails in undisturbed areas to work around unstable and unsafe areas of ice as the season progresses. As described above, these work-around or detour trails allow PistenBullys® and other tracked vehicles to safely go around soft spots or cracks.

Eni: Oooguruk Ice Road

Ice Road Construction, Use, and Maintenance

A single ice road and staging area ice pad are required each year to operate the ODS. As shown in Figure 3, the typical or proposed ice road extends 8.9 km (5.5 mi) offshore to the ODS. An alternative ice road as shown on Figure 4 would be located in shallower water and, therefore, can be grounded and used earlier in the season. The alternative route extends 11.2 km (7 mi) offshore and is used in years when an early road completion is required or when extra heavy loads, such as a drilling rig is expected. Either ice road is up to approximately 10.7 m (50 ft) wide with a similar width shoulder area on each side. The shoulders of the road are used when traffic must periodically detour around equipment or in areas where ice road maintenance is occurring. In addition, a grounded ice pad staging area is constructed on the southwest edge of the ODS (see Figures 3 and 4). The dimensions of the staging area are approximately 180 by 140 m (600 by 450 ft).

The ODS is located in 1.2 to 1.8 m (4 to 6 ft)of water, and the area from the site to the shore generally becomes grounded landfast ice in winter. The typical and alternate ice road routes shown in Figures 3 and 4 would be located in grounded rather than floating ice. There is one small area near the Colville River that has an open lead for a short duration in December but freezes solid within a few weeks. The road is clearly marked with delineators and monitored routinely by Alaska Clean Seas and industry environmental coordinators. Ice bridges or rig mats are not required for construction or maintenance of the ice road or ice pad staging area.

Initial construction of the sea ice road begins with surveying and staking the route as soon as the ice is thick enough to support snow machines. Low pressure pumps are used to flood the ice surface with seawater. Small tractor vehicles with augers and pumps are used for augering and flooding. An initial layer of water is applied, some of which may move to lower parts of the roadway. After the water has frozen, the next flood can be applied. Flooding operations occur 24 hours a day, 7 days a week during this phase. Depending on weather and sea ice conditions, construction of the ice road typically begins in early December and is complete by February 1st.

The ODS operations do not require offshore ice trails. However, a coastal trail in very shallow water right off of the beach is occasionally needed between Oliktok and the ODS ice road to demobilize equipment after tundra travel has been closed.

Proposed mitigation, monitoring, and reporting measures are described in detail later in this document (please see *Proposed Mitigation* and *Proposed Monitoring and Reporting*).

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the application summarize available information regarding status and trends, distribution and habitat preferences, and behavior and life history, of the potentially affected species. Additional information regarding population trends and threats may be found in NMFS' Stock Assessment Reports (SARs; *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments),* and more general information about these species (*e.g.,* physical and behavioral descriptions) may be found on NMFS' website (*https://www.fisheries.noaa.gov/find*-species).

Table 1 lists all species with expected potential for occurrence in the Beaufort Sea and summarizes information related to the population or stock, including regulatory status under the MMPA and ESA and potential biological removal (PBR), where known. For taxonomy, we follow Committee on Taxonomy (2018). PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS's SARs). While no mortality is anticipated or authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators of the status of the species and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS' stock abundance estimates for most species represent the total estimate of individuals within the geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. All managed stocks in this region are assessed in NMFS' U.S. 2018 SARs (Carretta *et al.,* 2019; Muto *et al.,* 2019). All values presented in Table 1 are the most recent available at the time of publication and are available in the 2018 SARs (Carretta *et al.,* 2019; Muto *et al.,* 2019).

TABLE 1—MARINE MAMMALS WITH POTENTIAL PRESENCE WITHIN THE PROPOSED PROJECT AREA

Common name	Scientific name	Stock	ESA/ MMPA status; Strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR	Annual M/SI [3]
Order Cetartiodactyla—Cetacea—Superfamily Mysticeti (baleen whales)						
Family Eschrichtiidae:						
Gray whale	*Eschrichtius robustus*	Eastern North Pacific	-; N	26,960 (0.05, 25,849)	801	139
Family Balaenidae:						
Bowhead whale	*Balaena mysticetus*	Western Arctic	E/D; Y	16,820 (0.052, 16,100)	161	46
Family Delphinidae:						
Beluga whale	*Delphinapterus leucas*	Beaufort Sea	-; N	39,258 (0.229, N/A)	Undet	139
Family Phocidae (earless seals)						
Ringed seal [4]	*Phoca hispida*	Alaska	T/D; Y	300,000 (NA, 170,000)	Undet	1,54
Spotted seal	*Phoca largha*	Alaska	-; N	461,625 (NA, 423,237)	12,697	329
Bearded seal [5]	*Erignathus barbatus*	Alaska	T/D; Y	301,836 (NA, 273,676)	Undet	557
Ribbon seal	*Histriophoca fasciata*	Alaska	-; N	184,695 (NA, 163,086)	9,785	3.9

[1] Endangered Species Act (ESA) status: Endangered (E), Threatened (T)/MMPA status: Depleted (D). A dash (-) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR or which is determined to be declining and likely to be listed under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated under the MMPA as depleted and as a strategic stock.

[2] NMFS marine mammal stock assessment reports online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports-region#reports.* CV is coefficient of variation; N_{min} is the minimum estimate of stock abundance.

[3] These values, found in NMFS' SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (*e.g.,* commercial fisheries, ship strike). Annual M/SI often cannot be determined precisely and is in some cases presented as a minimum value or range. A CV associated with estimated mortality due to commercial fisheries is presented in some cases.

[4] Ringed seal estimate is based on surveys conducted in the Alaska Chukchi and Beaufort seas in the late 1990s and 2000, and in the U.S. portion of the Bering Sea in 2012. This is the best available information for use here.

[5] Bearded seal estimate is based on surveys conducted in the U.S. portion of the Bering Sea in 2012. This is the best available information for use here.

All species that could potentially occur in the proposed survey areas are included in Table 1. As described below, only the ringed seal temporally and spatially co-occurs with the activity to the degree that take is reasonably likely to occur, and we have proposed authorizing it. However, the temporal and/or spatial occurrence of the rest of the species listed in Table 1 is such that take is not expected to occur, and they are not discussed further beyond the explanation provided here.

While ringed, spotted, and bearded seals are present in the Beaufort Sea during the open-water season, only ringed seals are likely to be in the nearshore environment during the ice-covered months. The other two species of ice seals only occur in the project area during the open-water season. Ribbon seal mostly occurs in the Chukchi Sea and western Beaufort Sea, and is considered as extra-limital in the project area. Therefore, the potential for encounters with bearded, spotted, and ribbon seals during ice road/trail construction and maintenance is extremely unlikely. As a result, these ice seal species will not be discussed further in this document.

None of the cetacean species listed above is expected to enter the ice-covered action areas during the winter months when ice road activities would be occurring. Therefore, the potential for encounters with cetaceans during ice road/trail construction and maintenance is extremely unlikely. As a result, cetacean species will not be discussed further in this document.

Ringed Seal

Ringed seals are circumpolar in distribution; the subspecies (*Phoca hispida hispida*) is present year-round in the Bering, Chukchi, and Beaufort seas off the coast of western and northern Alaska (Muto *et al.* 2017, Muto *et al.* 2018). Results of previous monitoring from Northstar (Aerts and Richardson 2009) and nearshore surveys in Foggy Island Bay east of the action areas (Aerts *et al.* 2008, Smultea *et al.* 2014) support the assumption that they are expected to be the most commonly occurring pinniped in the action areas during the ice road/trail season.

Throughout their range, ringed seals have an affinity for ice-covered waters and are well adapted to occupying both shore fast and pack ice (Kelly1988). They remain with the ice most of the year and use it as a platform for pupping and nursing in late winter to early spring, for molting in late spring to early summer, and for resting at other times of the year (Simpkins *et al.* 2003, Kelly *et al.* 2010). In the Beaufort, Chukchi, and Bering Seas ringed seals move seasonally coinciding with ice melting and retreating (Frost and Lowry 1984, Frost 1985, Kelly *et al.* 2010).

Ringed seals are closely associated with sea ice during breeding, pupping, and molting as are all ice seals. With the onset of freeze-up in the fall, ringed seal movements become increasingly restricted. Seals that have summered in the Beaufort Sea are thought to move west and south with the advancing ice pack, with many seals dispersing throughout the Chukchi and Bering seas where they remain throughout winter, and some staying in the Beaufort Sea (Frost and Lowry 1984, Muto *et al.* 2018).

During winter, ringed seals excavate and maintain several breathing holes to allow access to air while hunting prey species (*e.g.,* Arctic cod). The breathing holes also provide escape routes from polar bears and other predators such as foxes. Ringed seals in the action areas spend much of their time out of sight in their lairs or under the sea ice (BOEM 2018). Ringed seal movements during winter and spring are typically quite limited, especially where ice cover is extensive (Kelly *et al.* 2010).

In the spring (typically beginning in March), female ringed seals give birth to and nurse a single pup in a subnivean lair. The peak of pupping occurs in early April (Frost and Lowry 1981). Subnivean lairs are especially important for protecting pups, providing protection from predators and thermal protection from cold temperatures and wind.

Ringed seals feed year round (NMFS 2018a). Most ringed seal prey is small, and preferred prey tends to be schooling species that form dense aggregations. Fish of the cod family tend to dominate the diet from late autumn through early spring in many areas (Kovacs 2007).

Arctic cod is often reported to be the most important prey species for ringed seals, especially during the ice-covered periods of the year (Lowry *et al.* 1980).

The Alaska stock of ringed seals are the most abundant marine mammal in the Beaufort, Chukchi, and Bering seas (Kelly *et al.* 2010a, Kelly *et al.* 2010b). Currently a complete population estimate is not available for the entire Alaska stock (Allen and Angliss 2014, Muto *et al.* 2018). This is because abundance surveys of ringed seals in Alaska have used various methods and assumptions, and were conducted more than a decade ago; therefore, current and comprehensive abundance estimates or trends for the Alaska stock are not available (NMFS 2018a). Historic ringed seal population estimates in the Arctic ranged from 1 to 1.5 million seals (Frost 1985) to 3.3 to 3.6 million (Frost *et al.* 1988).

Ringed seal winter ecology studies conducted in the 1980s (Frost and Burns 1989, Kelly and Quakenbush 1990) and surveys associated with the Northstar development (Williams *et al.* 2001) provided information on both seal ice structure density and use where ice structures include both breathing holes and subnivean lairs. Ringed seal density estimates are based on these historical surveys (both on-ice and aerial).

Most ringed seals in the Beaufort and Chukchi seas follow the sea ice front south into the Bering Sea during fall where they remain throughout winter. Therefore, while they are still within the Beaufort Sea during winter, a much smaller portion of the Alaska ringed seal stock is present in the Beaufort Sea during winter as compared to the remainder of the year. Frost and Lowry (1984) estimated that approximately half of the population moves out of the Beaufort Sea, and into the Chukchi and Bering seas in winter.

Most taxonomists recognize five subspecies of ringed seals. The Arctic ringed seal subspecies occurs in the Arctic Ocean and Bering Sea and is the only stock that occurs in U.S. waters (referred to as the Alaska stock). NMFS listed the Arctic ringed seal subspecies as threatened under the ESA on December 28, 2012 (77 FR 76706), primarily due to anticipated loss of sea ice through the end of the 21st century due to ongoing climate change. On March 11, 2016, the U.S. District Court for the District of Alaska issued a memorandum decision in a lawsuit challenging the listing of ringed seals under the ESA (Alaska Oil and Gas Association, *et al.* v. National Marine Fisheries Service, *et al.,* Case No. 4:14–cv–00029–RRB). The decision vacated NMFS's listing of the Arctic subspecies of ringed seals as a threatened species. NMFS appealed that decision and on February 12, 2018, the Ninth Circuit U.S. Court of Appeals upheld the decision to list the ringed seal as threatened. The decision was affirmed and the listing reinstated on May 15, 2018.

A comprehensive and reliable abundance estimate for the Alaska stock of ringed seals is not available. However, using data from surveys in the late 1990s and 2000 (Bengtson *et al.,* 2005; Frost *et al.,* 2004), Kelly *et al.* (2010) estimated the total population in the Alaska Chukchi and Beaufort seas to be at least 300,000 ringed seals. This is likely an underestimate since surveys in the Beaufort Sea were limited to within 40 km (24.9 mi) from shore (Muto *et al.,* 2017). Conn *et al.* (2014) calculated an abundance estimate of about 170,000 ringed seals for the U.S. portion of the Bering Sea. This estimate did not account for availability bias and did not include ringed seals in the shorefast ice zone, which were surveyed using a different method. Thus, the actual number of ringed seals in the U.S. sector of the Bering Sea is likely much higher, perhaps by a factor of two or more (Muto *et al.,* 2017).

NMFS proposed critical habitat for the Arctic ringed seal in the northern Bering, Chukchi, and Beaufort seas off of Alaska on December 3, 2014 (79 FR 71714). The proposed critical habitat in U.S. waters includes all the contiguous marine waters from the ''coastline'' of Alaska to an offshore limit within the U.S. Exclusive Economic Zone (EEZ) and effectively include all marine waters within the EEZ where sea ice regularly forms during winter. The final rule is pending.

Generally, there is increasing concern about the future of the ringed seal populations due to receding ice conditions and potential habitat loss. Ringed seal habitat maybe modified by the warming climate and projections that suggest continued or accelerated warming in the future (Kelly *et al.* 2010). Climate models project ice and snow cover losses throughout the 21st century, with some variations, and increasing atmospheric concentrations of greenhouse gases that drive climate warming and increase ocean acidification (BOEM 2018), thereby affecting ringed seal habitat. The greatest impacts to ringed seals from climate change would manifest in less snow cover (BOEM 2018). Also, the duration of ice cover could be reduced leading to lower snow accumulation on ice (BOEM 2018), particularly over ringed seal subnivean lairs. Such changes would also threaten prey communities on which ringed seals depend.

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

This section includes a summary and discussion of the ways that components of the specified activity may impact marine mammals and their habitat. The *Estimated Take by Incidental Harassment* section later in this document includes a quantitative analysis of the number of individuals that are expected to be taken by this activity. The *Negligible Impact Analysis and Determination* section considers the content of this section, the *Estimated Take by Incidental Harassment* section, and the *Proposed Mitigation* section, to draw conclusions regarding the likely impacts of these activities on the reproductive success or survivorship of individuals and how those impacts on individuals are likely to impact marine mammal species or stocks.

Ringed seals could be adversely affected by exposure to visual and acoustic disturbances. The majority of impacts are likely to occur from visual exposure by machinery and vehicles used for ice roads and ice trails construction and from human presence. The associated noise from the machinery and vehicles could also cause pinniped behavioral modification and temporary displacement within the vicinity of the action area if the noise levels are high enough. In a few unlikely cases, these activities could result in serious injury or mortality if an animal is crushed by a construction machinery or vehicle while in its subnivean lair.

A series of reports from the Northstar development provide evidence of ringed seal reactions to human activity during ice road construction beginning in 1999. As summarized in Richardson and Williams (2000), approximately 6.6 km^2 (2.5 mi^2) were surveyed for ringed seals prior to initiation of ice road construction activities. Though much of the ice was flat and not optimal for seal lairs, surveys were conducted by biologists and Inupiat hunters who used avalanche probes to identify potential breathing holes and lairs. No breathing holes or lairs were documented during this January 1999 survey. A follow-up survey for ringed seal breathing holes and lairs was conducted in May 1999 using trained dogs. The May survey did locate at least two, possibly three, open breathing holes within the area previously surveyed in January.

The following year, a subsequent survey was undertaken using dog-based searches which found numerous seal structures within about 1 km (0.6 mi) of Northstar facilities before and after

intensive construction activities in early and late winter. This may indicate that the survey method using avalanche probes and Inupiat hunters was not effective or that ringed seals were unaffected by ice road/trail construction to such extent that it prevented them from establishing breathing holes in the project area (Richardson and Williams 2000).

During two replicate aerial surveys conducted in 1999, ringed seals were observed within approximately 0.64 km (0.4 mi) of ice roads (Richardson and Williams 2000). These six seals were not assumed to be the only seals located within that 0.64 km (0.4 mi) area. Using seal densities in similar water depths approximately 4 to 10 km (about 2 to 6.2 mi) from the ice roads, about 12 ringed seals would be expected to occur within 0.64 km (0.4 mi), and 110 ringed seals within 4 km (2.5 mi), during 1999. Seal behavior within 0 to 0.64 km (0.4 mi) of the road may have been affected in some subtle way; however, the observation of seals within that area suggests that effects of the ice roads were minor and localized. As summarized in Williams *et al.* (2006), several factors influence the rate of abandonment of seal lairs, making it challenging to attribute abandonment to any specific factor. Of 181 seal structures located within 11 to 3,500 m (36 ft to 2.1 mi) of Northstar during surveys conducted in 2001, 118 (65 percent) were still actively used in late May (the end of ice road season).

The effect of underwater noise on ringed seals is dependent on the ability of the seal to perceive or hear the sounds. Due to the overall relatively low-noise levels associated with the ice roads and ice trails construction and that most of these noises are airborne, it is highly unlikely seals in the vicinity of the construction site would suffer hearing damages (*i.e,* permanent hearing threshold shift or temporary hearing threshold shift). Temporary short-term changes in behavior or avoidance of the affected area as a result of disturbance is the most common response of marine mammals to increased noise levels (Richardson *et al.* 1995). Nonetheless, some minor disturbance due to in-air or underwater (ice-covered) conditions may occur as a result of ice road/trail activities. The types of impacts to ringed seals exposed to low-level noise may include masking and temporary displacement. Increased levels of natural and artificial sounds can disrupt behavior by masking. The masking of communication signals by anthropogenic noise may reduce the communication space of animals (Clark *et al.* 2009). Factors other than received sound level such as the activity state of animals exposed can affect the probability of a behavioral response (Ellison *et al.* 2012).

The current acoustic exposure threshold for Level B harassment for continuous noise sources is 120 dB re 1 µPa (NMFS 2018). Southall *et al.* (2007) assessed relevant studies, found considerable variability among pinnipeds, and determined exposures between approximately 90 and 140 dB generally do not induce strong behavioral responses of pinnipeds in water, but an increasing probability of avoidance and other behavioral effects exists in the 120 to 160 dB range. The use of the Ditchwitch to cut ice or from pumping at Northstar did not exceed 120 dB at 100 m (328 ft) (Greene *et al.* 2008). Despite the potential exposure to such noise levels, it is highly unlikely the disturbance would result in biologically significant effects on the seals (individually or to the population) as evident from Northstar research (Richardson and Williams 2000). In addition, Kelly *et al.* (1986) report that some ringed seals temporarily departed their lairs when sound sources were within 97 to 3,000 m (0.06 to 1.9 mi) but did return to their lairs later. Haul outs with and without disturbance were not significantly different, and time spent in the water versus hauled out was not significantly different.

Displacement of seals from ice road construction is considered unlikely but could occur. As described in Williams *et al.* (2006), during three surveys conducted in November/December, March and May of 2001 during Northstar construction activities, 181 ringed seal structures were located and 118 (65 percent) were still actively used by late May 2001. Active ringed seal structures appeared to be evenly distributed across the Northstar study area in relation to the facility. The noise heard through snow and ice, and into the subnivean lair or den location of the animal should be considerably weaker than at source due to sound being attenuated in the ice and snow. In March 2002, sounds and vibrations from vehicles traveling along an ice road along Flaxman Island (a barrier Island east of Prudhoe Bay) were recorded in artificially constructed polar bear dens. Sounds were attenuated strongly by the snow cover of the artificial dens; broadband vehicle traffic noise was reduced by 30–42 dB. Due to attenuation of noise through ice and snow, it is less likely that seals in lairs would be exposed to levels exceeding 120 dB re 1 µPa underwater and that such exposure would result in displacement.

In air noise associated with ice road/trail activities is not expected to cause disturbance to ringed seals, as construction noise is not likely to exceed 100 dB re 20 µPa at the source. During the winter of 2000, background unweighted in air noise levels from various machineries measured in the vicinity of Northstar ranged from 59 to 84 dB re 20µPa, and this background noise level was related to wind speed (Greene *et al.* 2008). Similar levels were reported during the winter of 2001 and 2002 by Blackwell *et al.* (2004a, b) with minimum background unweighted in air noise levels of 44 to 52 dB re 20µPa measured in ice-covered conditions with low wind up to 10 km (6 mi) from Northstar in Prudhoe Bay. The NMFS in air threshold for disturbance of phocids (*i.e.,* ringed seals) is 100 dB re 20 µPa (NMFS 2018b). For this reason, in air noise is not expected to result in harassment of seals.

The probability that acoustic noise associated with ice road and trail construction would result in masking any acoustic signals of ringed seals during construction is very low. Ice road and trail construction activities would be initiated prior to March 1st when animals begin constructing dens prior to pupping and during pupping when seals are minimally vocal in the dens to prevent predation. Also, in order for the effects of masking to occur, a seal would have to be within close proximity to the specific sound source to result in a Level B harassment. The probability that the noise producing activities associated with the proposed Project would result in masking acoustic signals important to the behavior and survival of marine mammal species in the Action Areas is low.

Overall, the construction and maintenance of ice roads and trails is not expected to cause significant impacts on habitat used by ringed seals or on their food sources. Landfast ice near the shoreline is the best habitat for ringed seal pupping (Kelly 1988), with water depth strongly dictating whether ringed seals overwinter in a given area. Depths greater than about 3 m (10 ft) are typically the minimum depth suitable for successful lair construction (Miller *et al.* 1998, Link *et al.* 1999) although more shallow areas with open leads or cracks can be attractive to seals as described for the road between OPP and SID.

While ringed seals may be present in the proposed Action Areas during winter, the number of seals is generally expected to be relatively low during ice road/trail activities. Ice road construction is a short-term activity with minor disruptions to the natural

habitat. Ringed seals feed on fish and a variety of benthic species including crabs and shrimp. There should be no impact on the distribution of fish or zooplankton as a result of ice road/trail construction within the Action Areas. The roads and trails melt each year and do not affect water circulation, substrate, fish presence or use of the area, or benthic populations.

NMFS' proposed rule designating critical habitat for ringed seals identified three physical and biological features (PBFs) essential to the conservation of the species including:

1. Suitable sea ice habitat for the formation and maintenance of subnivean birth lairs used for sheltering pups during whelping and nursing, which is defined as seasonal landfast (shorefast) ice, except for any bottom-fast ice extending seaward from the coast line in waters less than 2 m (6.5 ft) deep, or dense, stable pack ice, that has undergone deformation and contains snowdrifts at least 54 cm (21 in.) deep;

2. Sea ice habitat suitable as a platform for basking and molting, which is defined as sea ice of 15 percent or more concentration, except for any bottom-fast ice extending seaward from the coast line in waters less than 2 m (6.5 ft) deep; and

3. Primary prey resources to support Arctic ringed seals, which are defined to be Arctic cod, saffron cod, shrimps, and amphipods.

Disturbance associated with construction, operation and maintenance of ice roads and trails is unlikely to have long-term effects on the availability of sea ice habitat identified in PBFs 1 and 2. Disturbances due to ice road and trail construction and maintenance activities are not expected to have any effect on PBF3, because these activities would not cause injury or mortality to fish species, nor would it displace food resources of ringed seals.

Estimated Take

This section provides an estimate of the number of incidental takes proposed for authorization through this IHA, which will inform both NMFS' consideration of ''small numbers'' and the negligible impact determination.

Harassment is one of the types of take expected to result from these activities. Except with respect to certain activities not pertinent here, section 3(18) of the MMPA defines ''harassment'' as any act of pursuit, torment, or annoyance, which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

Authorized takes would primarily be by Level B harassment, as exposure of ringed seals by construction activities and noise has the potential to result in disruption of behavioral patterns for individual animals. There could also be potential for serious injury/mortality if an animal is crushed by a construction machinery or vehicle while in its subnivean lair. Auditory injury is unlikely to occur because the overall noise levels generated from the construction activities are low. The proposed mitigation and monitoring measures are expected to minimize the severity of such taking to the extent practicable.

Below we describe how the take is estimated.

Generally speaking, we estimate take by considering: (1) Marine mammals (ringed seals) likely to be exposed to visual and acoustic disturbances from ice roads and ice trails construction; (2) the density or occurrence of marine mammals within the areas likely to be disturbed; and, (3) the number of days of activities. We note that while these basic factors can contribute to a basic calculation to provide an initial prediction of takes, additional information that can qualitatively inform take estimates is also sometimes available (*e.g.,* previous monitoring results or average group size). Below, we describe the factors considered here in more detail and present the proposed take estimate. This section includes an overview of estimated ringed seal density in the area, a description of the area of potential disturbance, estimates for noise sources (under ice-covered conditions and in air), and a discussion of the potential for behavioral responses or serious injury or mortality due to ice road/trail/pad activities.

Ringed Seal Densities

Ringed seals are present in the nearshore Beaufort Sea waters and sea ice year round, maintaining breathing holes and excavating subnivean lairs in the landfast ice during the ice-covered season. During this ice-covered season, ringed seals' home ranges are generally less than 5 km^2 (2 mi^2) in area (Frost *et al.* 2002, Kelly *et al.* 2005). While older datasets from the 1970s and 80s provide important context for understanding seal presence in the region, only more recent surveys beginning in 1997 have been used to calculate density for this rule as described in the following sections.

Winter Densities

Ringed seals overwinter in the landfast ice in and around the project area. Relatively few data are available for ringed seal density in the southern Beaufort Sea during the winter months, but several studies on ringed seal winter ecology were undertaken during the 1980s (Kelly *et al.* 1986, Frost and Burns 1989). These reports, in addition to data associated with the Northstar development and the abandoned Seal Island (Williams *et al.* 2001, Frost *et al.* 2002) provide information on both seal ice structure use (where ice structures include both breathing holes and subnivean lairs) and the density of ice structures (Table 4).

Both male and female ringed seals maintain a number of breathing holes and haul out in more than one subnivean lair during the ice-covered season. Kelly *et al.* (1986) found that of their tagged seals, the animals would haul out between one and multiple subnivean lairs. The distances between each lair could be as great as 4 km (2.5 mi) with numerous breathing holes in between (Kelly *et al.* 1986). While these authors calculated the average number of lairs used by an individual seal to be 2.85 (SD = 2.51) per animal, they also suggest that this is likely to be an underestimate.

TABLE 2—SEAL STRUCTURE DENSITY ALONG THE BEAUFORT SEA COAST NEAR THE PROJECT AREA

Year	Sea structure density/km^2	Source
1982	3.6	Frost and Burns 1989.
1983	0.81	Kelly *et al.* 1986.
Dec. 1999	0.71	Williams *et al.* 2001.
May 2000	1.2	Williams *et al.* 2001.
Average structure density/km^2	1.58	

In 1982, aerial surveys were conducted near Reindeer Island, just east of the project area (Northstar and SID), where seismic exploration activities were occurring. Seal structures were located by searching with a dog along 267 km (166 mi) of seismic and control lines as well as 28 km (17 mi) of non-systematic search lines (295 linear km [183 linear mi] total). A total of 157 structures were found resulting in an average estimate of 0.53/km seal structures (Kelly *et al.* 1986) or 3.6 structures/km² (Frost and Burns 1989).

In 1983, the vicinity of Reindeer Island was surveyed again and the average number of seal structures recorded was 0.70/km over approximately 81 km (50 mi) of linear survey lines resulting in an average number of total structures of 0.81/km².

In 1999, a total of 26 seal structures were located within a 36.5 km² area encompassing the Northstar Development resulting in an estimated 0.71 structures/km² in December 1999 and 1.2 structures/km² in May 2000 (Richardson and Williams 2001).

To estimate ringed seal density during the winter, an average structure density was divided by the average number of structures used by seals (Kelly *et al.* 1986). Thus, for the winter season ringed seal density has been estimated as the average ice structure density (1.58/km²) divided by the average number of ice structures used by an individual seal (2.85, SD = 2.51). This results in an estimated density of 0.55 ringed seals/km² (for example, 1.58/2.85 = 0.55). However, this density is likely to be an overestimate because the equation denominator of 2.85 is assumed to be an underestimate (Kelly *et al.* 1986).

Average ice structure density/Average number of structures per seal = Estimated Average Winter Seal Density: 1.58/2.85 = 0.55 seals/km².

Spring Densities

In 1997, prior to Northstar construction, British Petroleum Exploration Alaska (BPXA) conducted aerial surveys for seals as part of the industry monitoring programs for the Northstar facility. These datasets provide the best available information on spring ringed seal density for the project area. Information is based on aerial surveys were flown around Northstar and west of Prudhoe Bay during late May and early June (Frost *et al.* 2002, Moulton *et al.* 2002a,b, Richardson and Williams 2003) when the greatest percentage of seals have abandoned their lairs and are hauled out on the ice (Kelly *et al.* 2010, Kelly *et al.* 2010).

Because densities were consistently very low where water depth was <3m (and these areas are generally frozen solid during the ice-covered season) densities were calculated where water depth was >3m deep (Moulton *et al.* 2002a,b), Richardson and Williams 2003). Frost *et al.* (2002) and Frost *et al.* (2004) reported slightly higher densities based on surveys conducted during this same time period between 1997 and 1999. As with all aerial surveys, animal densities are underestimated because animals are missed, or not counted. This is generally because they are not hauled out where they can be seen or are missed by the observer. Therefore, these density estimates represent minimum estimates during the time and location of the surveys. The average uncorrected densities calculated based on these separate datasets (1997–1999) are provided in Table 5. It is acknowledged that densities of seals near the Eni SID Action Area are likely to be lower than densities calculated for the purposes of estimating take in this analysis, due to much shallower water near the Eni SID site. However, for consistency and as a precautionary measure, the same density estimates are used throughout this analysis.

TABLE 3—ESTIMATED RINGED SEAL DENSITIES (UNCORRECTED) BASED ON SPRING AERIAL SURVEYS DURING ICE-COVERED CONDITIONS, 1997–2002

Year	Uncorrected seal density (no/km²)		Average uncorrected ringed seal density (no/km²)
	Moulton *et al.* 2002, 2005*	Frost *et al.* 2002, 2004	
1997	0.43	0.73	0.58
1998	0.39	0.64	0.52
1999	0.63	0.87	0.75
2000	0.47	.....	0.47
2001	0.54	.....	0.54
2002	0.83	.....	0.83
Average density (no/km²)	.....	.....	0.61

* Water depths > 10 ft.

For the period 2000, 2001, and 2002, (Moulton *et al.* 2005) reported ringed seal densities (uncorrected) on landfast ice during Northstar construction were calculated as 0.47, 0.54, and 0.83 seals/km². Based on the average density of surveys flown from 1997 to 2002 the uncorrected density of ringed seals during the spring is expected to be 0.61 ringed seals/km².

As reported in Frost *et al.* (2002) habitat-related variables including water depth, location relative to the fast ice edge, and ice deformation have shown to result in substantial and consistent effects on the distribution and abundance of seals. Moulton *et al.* (2003) and Moulton *et al.* (2005) also reported that environmental factors such as date, water depth, degree of ice deformation, presence of meltwater, and percent cloud cover had more conspicuous and statistically-significant effects on seal sighting rates than did any human-related factors. Thus, the intra- and inter-annual variability in survey conditions and ice characteristics is unavoidable and identifying trends in seal abundance or estimating density is challenging.

TABLE 4—RINGED SEAL DENSITIES

Winter average density (seal/km²)	Spring average density (seal/km²)
0.55	0.61

In summary, for the purposes of estimating take associated with ice road/trail activities, winter and spring densities are assumed to be 0.55 and 0.61 seals/km² (respectively) as shown in Table 6.

Take Estimates

Level B Harassment

To estimate exposures of ringed seals to disturbance that may result in a take, the total area of potential disturbance (*i.e.,* exposure area) associated with construction and maintenance of the roads/trails/pads is defined as 170 m (approximately 558 ft) on either side of the road/trail/pad centerline; a total width of 340 m (approximately 1,115 ft).

Again, the total width of the exposure area is 340 m (558 ft). This width is then multiplied by the total length of roads/trails likely to be constructed each year to calculate the exposure area in km². Due to the variability in the length of ice roads/trails that may be needed from year to year, a 10 percent buffer is also added to the total length and is accounted for in the total area calculated. The total area of exposure is then multiplied by the seasonal ringed seal density to calculate the total estimated ringed seals exposed each season. Since there are two seasons during which ringed seals may be exposed to ice road activity (winter and spring), the exposure estimates for winter and spring are then added together to calculate the total number of seals exposed per year. For example, the following calculation was used for Northstar ice roads and trails:

TAE x D = TES

TES (winter) + TES (spring) = TEY

where

TAE = Total Area of Exposure

D = Species Density (variable by season)

TES = Total Estimated Seals Exposed Per Season

TEY=Total Estimated Seals Exposed Per Year

For example:

12.96 km² (TAE) × 0.55 (winter density per km²) = 7.13 seals/winter

12.96 km² (TAE) × 0.61 (spring density per km²) = 7.91 seals/spring

7.13 seals/winter + 7.91 seals/spring = 15.03 seals/year

As stated in Description of Proposed Activities section earlier, an ice trail is constructed at SID each year and is located approximately 15 to 30 m (50 to 100 ft) west of the ice road. The ice trail is located within the exposure area of the ice road centerline (340 m). Therefore, the same formula shown above is applied for calculating potential takes at SID.

Based on the exposure estimates, Eni and Hilcorp request takes for Level B harassment for the 5-year period as shown in Table 7. Takes are presented annually for each company and are requested for ice road and ice trail construction, operation and maintenance expected to occur between December and May of each year, depending on local conditions. Potential Level B harassment takes could occur in all five years.

Table 5. Ringed Seal Level B Harassment Take Estimate Associated with Ice Road/Trail Activities.

	Total ice road length (km)	Total ice trail length (km)	Total length plus 10% buffer[1]	Total width (km)	Total area of exposure (km²)	Est. no. seals exposed during winter (density[2] x area)	Est. no. seals exposed during spring (density[2] x area)	Total est. takes per year	Total Level B take estimates	Total est. takes over 5 years
Eni SID	6.76	0[3]	7.43	0.42	3.12	1.72	1.90	3.62	4	20
Eni ODS	11.26[4]	0	12.39	0.34	4.21	2.32	2.57	4.89	5	25
Hilcorp Northstar	11.71	22.94	38.12	0.34	12.96	7.13	7.91	15.03	16	80

[1] To account for variability

[2] Density: Winter=0.55 seals/km²; Spring=0.61 seals/km²

[3] Note that Eni constructs an ice trail each year that is approximately 15 to 30 m west of the ice road. The trail is located within the exposure area of 170 m and is accounted for in estimated takes.

[4] Length of alternate route used as worst case.

NMFS does not expect Level A harassment of ringed seal to occur, as noise and visual exposure to construction activities will not become injurious as defined for purposes of a Level A take under the MMPA. However, it is possible that a seal may be in its lair during ice roads/trails construction and thus, it is possible for a seal to become crushed by construction machinery or vehicle while the road/trail is being erected, resulting in injury, serious injury, or mortality. A detailed discussion of such events is provided below.

Potential Serious Injury or Mortality

Based on a review of literature and monitoring reports from Northstar and other North Slope projects, there is documentation of one seal mortality associated with a vibroseis program outside the barrier islands east of Bullen Point in the eastern Beaufort Sea (MacLean 1998). During a 1999 NMFS workshop to review on-ice monitoring and research, Dr. Brendan Kelly (then of the University of Alaska), also indicated that a dead ringed seal pup was found during his research using trained dogs to locate seal structures in the ice. The dead ringed seal pup was located approximately 1.5 km (0.9 mi) from the Northstar ice road. No data on the age of the pup, date of death, necropsy results, or cause of death are available. Therefore, whether ice road construction at Northstar could have contributed to the death of this pup, or if its death was coincidental to Northstar activities cannot be determined (Richardson and Williams 2000).

While the only recorded mortality of a seal occurred in 1998, Eni and Hilcorp are also requesting ten takes for each development over the 5-year period for potential ringed seal serious injury or mortality during construction, operation and maintenance of ice roads and trails.

However, NMFS does not consider this request to be adequately justified, and is concerned that the requested mortality in this proposed action is much higher than other similar actions.

For instance, in the 2019 Hilcorp Liberty rule for ice road and ice trail construction on the North Slope, there are two lethal takes proposed over the first 5 years (and eight over the following 20 years, for 10 total mortalities over 25 years). In that action, four ice roads, totaling 51.5 km in length would be constructed: In Years 1 through 3, all four roads would be constructed; in Years 4 and 5, only Road #1 would be constructed (11.3 km in length). By comparing the two proposed actions, Hilcorp Northstar and Eni are constructing more ice roads/trails than Hilcorp is at the Liberty site over a five-year period.

In terms of the distribution of construction activities between the two companies, Hilcorp is constructing 1.9 times as many ice road/trail kilometers as Eni is at either SID or ODS. However, Eni's construction activities encompass two separate sites and each have the potential to encounter inhabited seal lairs given an assumed equal distribution of species. Based on these factors, NMFS proposes authorizing three serious injury/mortalities for ice road/trail activities at each of Eni's sites (Spy Island and Oooguruk), and six serious injury/mortalities at Hilcorp's Northstar site, all over five years. A summary of serious injury/mortality for Hilcorp and Eni over the five-year period is provided in Table 8.

TABLE 6—TOTAL ESTIMATED RINGED SEAL TAKES ANNUALLY AND OVER THE 5-YEAR PROPOSED LOA PERIOD

	Serious injury/ mortality for 5 years
Eni SID	3
Eni ODS	3
Hilcorp Northstar	6
Total	12

Effects of Specified Activities on Subsistence Uses of Marine Mammals

Subsistence hunting continues to be an essential aspect of Inupiat Native life, especially in rural coastal villages. The Inupiat participate in subsistence hunting activities in and around the Beaufort Sea. The animals taken for subsistence provide a significant portion of the food that will last the community through the year. Marine mammals represent on the order of 60–80 percent of the total subsistence harvest. Along with the nourishment necessary for survival, the subsistence activities strengthen bonds within the culture, provide a means for educating the younger generation, provide supplies for artistic expression, and allow for important celebratory events.

The proposed ice roads/trails construction projects are generally remote from subsistence use areas. Nuiqsut is the closest Native Alaskan community to the Northstar, ODS and SID facilities; located approximately 91 km (about 57 mi) southwest from Northstar, 40 km (about 25 mi) from ODS, and 56 km (about 35 mi) from SID. Primary subsistence users in the area between Oliktok Point and West Dock are residents from the village of Nuiqsut. People from Utqiagvik (about 309 and 264 km [192 and 164 mi] west of Northstar and SID, respectively) and Kaktovik harvest marine mammals that pass through the area but generally do not hunt there. Kaktovik is 196 km (122 mi) east of Northstar and 241 km (150 mi) east of SID.

Nuiqsut hunters harvest ringed seals primarily during open water periods in July through August. In summer, boat crews hunt ringed, spotted and bearded seals. The most important seal hunting area for Nuiqsut hunters is off the Colville Delta, as far east as Pingok Island. The closest edge of the main sealing area at Pingok Island, is about 27 km (17 mi) west of Northstar (SRBA 2010, Galginaitis 2014). While less frequent than open water hunting, seals are taken by hunters on snow machines before break-up.

In summary, Hilcorp and Eni's proposed ice roads and ice trails construction projects would occur far away from subsistence activities, and would be conducted during the time few subsistence activities occur. In winter and spring, small numbers of ringed seals may be disturbed and possibly displaced from the immediate locations of the ice roads and trails shown on Figures 1 through 4. Seal hunters would likely avoid the areas near SID, Northstar and ODS in favor of less developed more productive areas closer to the main sealing areas near the Colville River delta. Therefore, construction and maintenance of the ice roads and trails is unlikely to impact on winter subsistence hunting of ringed seals.

Proposed Mitigation

In order to issue an LOA under Section 101(a)(5)(A) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for certain subsistence uses. NMFS regulations require applicants for incidental take authorizations to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting such activity or other means of effecting the least practicable adverse impact upon the affected species or stocks and their habitat (50 CFR 216.104(a)(11)).

In evaluating how mitigation may or may not be appropriate to ensure the least practicable adverse impact on species or stocks and their habitat, as well as subsistence uses where applicable, we carefully consider two primary factors:

(1) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat, as well as subsistence uses. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned), the likelihood of effective implementation (probability implemented as planned), and;

(2) the practicability of the measures for applicant implementation, which may consider such things as cost, impact on operations, and, in the case of a military readiness activity, personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

Mitigation for Marine Mammals and Their Habitat

For Hilcorp and Eni's proposed ice roads and trails construction project, Hilcorp and Eni worked with NMFS and proposed the following mitigation measures to minimize the potential impacts to marine mammals in the project vicinity. The primary purposes of these mitigation measures are to minimize human-seal interactions and to avoid takes by serious injury/mortality from the activities, to monitor marine mammals within designated zones of influence in the project vicinity and, if seals are within the designated shutdown zone after March 1 during the

pupping season, to initiate immediate pause of all construction activities, making it very unlikely potential injury or serious injury/mortality to seals would occur and ensuring that Level B behavioral harassment of seals would be reduced to the lowest level practicable. Construction activities may result after the seals leave the shutdown zone on their own.

The proposed mitigation and monitoring measures are described below.

Wildlife Training

Prior to initiation of sea ice road- and ice trail-related activities, project personnel associated with ice road construction, maintenance, use or decommissioning (*i.e.,* ice road construction workers, surveyors, security personnel, and the environmental team) will receive annual training on implementing mitigation and monitoring measures. Personnel are advised that interactions with, or approaching, any wildlife is prohibited. Annual training also includes reviewing the company's Wildlife Management Plan. In addition to the mitigation and monitoring plans, other topics in the training will include:

- Ringed Seal Identification and Brief Life History
- Physical Environment (habitat characteristics and how to potentially identify habitat)
- Ringed Seal Use in the Ice Road Region (timing, location, habitat use, birthing lairs, breathing holes, basking, etc.)
- Potential Effects of Disturbance
- Importance of Lairs, Breathing Holes and Basking to Ringed Seals

General Mitigation Measures Implemented Throughout the Ice Road/Trail Season

General mitigation measures will be implemented through the entire ice road/trail season (December through May) including during construction, maintenance, use and decommissioning.

- Ice road/trail speed limits will be no greater than 45 miles per hour (mph) under typical circumstances but may be exceeded in emergency situations. Travel on ice roads and trails is restricted to industry staff.
- Following existing safety measures, delineators will mark the roadway in a minimum of ¼-mile increments on both sides of the ice road to delineate the path of vehicle travel and areas of planned on-ice activities (*e.g.,* emergency response exercises). Following existing safety measures currently used for ice trails, delineators will mark one side of an ice trail a minimum of every ¼ mile. Delineators will be color-coded, following existing safety protocol, to indicate the direction of travel and location of the ice road or trail. These measures will ensure that vehicles stay on disturbed ice roads/trails and will not deviate to undisturbed areas.
- Corners of rig mats, steel plates, and other materials used to bridge sections of hazardous ice, will be clearly marked or mapped using GPS coordinates of the locations, so vehicles travel on ice roads/trails will not deviate to undisturbed areas.
- Personnel will be instructed to remain in the vehicle and safely continue, if they encounter a ringed seal while driving on the road.

Mitigation Measures After March 1st

After March 1st, and continuing until decommissioning of ice roads/trails in late May or early June, the on-ice activities mentioned above can occur anywhere on sea ice where water depth is less than 3 m (10 ft) (*i.e.,* habitat is not suitable for ringed seal lairs). However, if the water is greater than 3 m (10 ft) in depth, these activities should only occur within the boundaries of the driving lane or shoulder area of the ice road/trail and other areas previously disturbed (*e.g.,* spill and emergency response areas, snow push areas) when the safety of personnel is ensured.

In addition to the general Mitigation Measures, the following measures will also be implemented after March 1st:

- Ice road/trail construction, maintenance and decommissioning will be performed within the boundaries of the road/trail and shoulders, with most work occurring within the driving lane. To the extent practicable and when safety of personnel is ensured, equipment will travel within the driving lane and shoulder areas.
- Blading and snow blowing of ice roads will be limited to the previously disturbed ice road/shoulder areas to the extent safe and practicable. Snow will be plowed or blown from the ice road surface.
- In the event snow is accumulating on a road within a 45.7-m (150-ft) radius of an identified downwind seal or seal lair (as identified by seal ice structure), operational measures will be used to avoid seal impacts, such as pushing snow further down the road before blowing it off the roadway. Vehicles will not stop within 45.7 m (150 ft) of identified seals or within 152.4 m (500 ft) of known seal lairs.
- When safety of personnel is ensured, tracked vehicle operation will be limited to the previously disturbed ice trail areas. When safety requires a new ice trail to be constructed after March 1st, construction activities such as drilling holes in the ice to determine ice quality and thickness, will be conducted only during daylight hours with good visibility. Ringed seal structures will be avoided by a minimum of 45.7 m (150 ft) during ice testing and new trail construction. Once the new ice trail is established, tracked vehicle operation will be limited to the disturbed area and when safety of personnel is ensured.
- If a seal is observed on ice within 45.7 m (150 ft) of the centerline of the ice road/trail, the following mitigation measure will be implemented:
- Construction, maintenance or decommissioning activities associated with ice roads and trails will not occur within 45.7 m (150 ft) of the observed ringed seal, but may proceed as soon as the ringed seal, of its own accord, moves farther than 45.7 m (150 ft) distance away from the activities or has not been observed within that area for at least 24 hours. Transport vehicles (*i.e.,* vehicles not associated with construction, maintenance or decommissioning) may continue their route within the designated road/trail without stopping.

Proposed Monitoring and Reporting

General Monitoring Measures Implemented Throughout the Ice Road/Trail Season

General monitoring measures will be implemented through the entire ice road/trail season including during construction, maintenance, use and decommissioning.

If a ringed seal is observed within 45.7 m (150 ft) of the center of an ice road or trail, the operator's Environmental Specialist will be immediately notified with the information provided in the Reporting section below.

- The Environmental Specialist will relay the seal sighting location information to all ice road personnel and the company's office personnel responsible for wildlife interaction, following notification protocols described in the company-specific Wildlife Management Plan. All other data will be recorded and logged.
- The Environmental Specialist or designated person will monitor the ringed seal to document the animal's location relative to the road/trail. All work that is occurring when the ringed seal is observed and the behavior of the seal during those activities will be documented until the animal is at least 45.7 m (150 ft) away from the center of the road/trail or is no longer observed.

• The Environmental Specialist or designated person will contact appropriate state and Federal agencies as required.

Monitoring Measures After March 1st

In addition to the general Monitoring Measures, the following measures will also be implemented after March 1st:

If an ice road or trail is being actively used, under daylight conditions with good visibility, a dedicated observer (not the vehicle operator) will conduct a survey along the sea ice road/trail to observe if any ringed seals are within 152.4 m (500 ft) of the roadway corridor. The following survey protocol will be implemented:

• Surveys will be conducted every other day during daylight hours;

• Observers for ice road activities need not be trained Protected Species Observers (PSOs), but they must have received the training described above and understand the applicable sections of the Wildlife Interaction Plan. In addition, they must be capable of detecting, observing and monitoring ringed seal presence and behaviors, and accurately and completely recording data; and

• Observers will have no other primary duty than to watch for and report observations related to ringed seals during this survey. If weather conditions become unsafe, the observer may be removed from the monitoring activity.

If a ringed seal structure (*i.e.,* breathing hole or lair) is observed within 152.4 m (500 ft) of the ice road/trail, the location of the structure will be reported to the Environmental Specialist who will then carry out notification protocol identified above and:

• An observer will monitor the structure every six hours on the day of the initial sighting to determine whether a ringed seal is present. Monitoring for the seal will occur every other day the ice road is being used unless it is determined the structure is not actively being used (*i.e.,* a seal is not sighted at that location during monitoring). A lair or breathing hole does not automatically imply that a ringed seal is present.

Reporting

A final end-of-season report compiling all ringed seal observations will be submitted to NMFS Office of Protected Resources within 90 days of decommissioning the ice road/trail. The report will include:

• Date, time, location of observation;

• Ringed seal characteristics (*i.e.,* adult or pup, behavior (avoidance, resting, etc.));

• Activities occurring during observation including equipment being used and its purpose, and approximate distance to ringed seal(s):

• Actions taken to mitigate effects of interaction emphasizing: (1) Which mitigation and/or monitoring measures were successful; (2) which mitigation and/or monitoring measures may need to be improved to reduce interactions with ringed seals; (3) the effectiveness and practicality of implementing mitigation and monitoring measures; (4) any issues or concerns regarding implementation of mitigation and/or monitoring measures; and (5) potential effects of interactions based on observation data; and

• Proposed updates (if any) to Wildlife Management Plan(s) or Mitigation and Monitoring Measures.

In the rare event a seal is killed or seriously injured by ice road/trail activities, NMFS will be notified immediately.

In the event ice road/trail personnel discover a dead or injured seal but the cause of injury or death is unknown or believed not to be related to ice road/trail activities, NMFS will be notified within 48 hours of discovery.

Mitigation for Subsistence Uses of Marine Mammals or Plan of Cooperation

Regulations at 50 CFR 216.104(a)(12) further require IHA applicants conducting activities that take place in Arctic waters to provide a Plan of Cooperation or information that identifies what measures have been taken and/or will be taken to minimize adverse effects on the availability of marine mammals for subsistence purposes. A plan must include the following:

• A statement that the applicant has notified and provided the affected subsistence community with a draft plan of cooperation;

• A schedule for meeting with the affected subsistence communities to discuss proposed activities and to resolve potential conflicts regarding any aspects of either the operation or the plan of cooperation;

• A description of what measures the applicant has taken and/or will take to ensure that proposed activities will not interfere with subsistence whaling or sealing; and

• What plans the applicant has to continue to meet with the affected communities, both prior to and while conducting the activity, to resolve conflicts and to notify the communities of any changes in the operation.

As discussed earlier, Hilcorp and Eni's proposed ice roads and trails construction is expected to have no unmitigable adverse impacts on subsistence use of marine mammals in the project area, and the construction projects would occur in areas away from subsistence activities during the time when there is no subsistence activities. Nevertheless, both Hilcorp and Eni have developed Plans of Corporations (POCs) to ensure that no impact would occur. Both companies have been engaging the communities of Utqiagvik and Nuiqsut to share information about planned exploration/development activities and to maintain dialogue about measures to minimize potential impacts on the subsistence harvest of seals or whales. For the proposed ice roads and ice trails construction and maintenance activities, Hilcorp and Eni developed further mitigation and monitoring measures to minimize the potential impacts to subsistence use of marine mammals in the area. These measures are described below.

Hilcorp

To help minimize disturbances to marine mammal subsistence resources, Hilcorp has signed a Conflict Avoidance Agreement (CAA) with the Alaska Eskimo Whaling Commission (AEWC) and Whaling Captains' Associations of nearby North Slope communities. The CAA describes measures to minimize any adverse effects on the availability of bowhead whales for subsistence use. Hilcorp also conducts the Cross Island whaling survey every year to document any conflicts and ensure that operations continue to be compatible with the hunt.

The CAA and much of the coordination focus on whales and whaling activities. To date, the Native community has not expressed concerns over interactions with seals, particularly during the ice-covered seasons. Hilcorp states that it will continue to address questions and concerns from community members, and continue to provide them with contact information of project management to which they can direct concerns related to Northstar operations.

In addition, Hilcorp has adopted the ''Good Neighbor Policy'' originally put in place for Northstar by BPXA. The policy is a commitment to the eleven whaling villages, the Inupiat Community and the Siberian Yupik Community to establish financial assurance in the event of an oil spill. While the focus is on bowhead whales, the policy does include other Arctic marine resources including ringed seals. The Good Neighbor Policy also outlines how Hilcorp would provide transportation for the subsistence

community to alternate hunting areas in the event that a spill prevents the use of Cross Island or other hunting areas. It also has provisions for providing interim alternative food supplies to community members, along with counselling and cultural assistance. Hilcorp is committed to adhering to the CAA and Good Neighbor Policy for the duration of North Slope operations as necessary.

Eni

To help minimize disturbances to marine mammal subsistence resources, Eni also signs a CAA each year with the AEWC and Whaling Captains' Associations of nearby North Slope communities. The CAA describes measures to minimize any adverse effects on the availability of bowhead whales for subsistence use. Eni also conducted multiple community meetings and meetings with subsistence organizations such as the AEWC and NWCA to establish and maintain positive relationships with locals that rely on subsistence resources in the area.

Based on our evaluation of the applicant's proposed measures, NMFS has preliminarily determined that the proposed mitigation measures provide the means effecting the least practicable impact on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for subsistence uses.

Negligible Impact Analysis and Determination

NMFS has defined negligible impact as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.,* population-level effects). An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be ''taken'' through harassment, NMFS considers other factors, such as the likely nature of any responses (*e.g.,* intensity, duration), the context of any responses (*e.g.,* critical reproductive time or location, migration), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS's implementing regulations (54 FR 40338; September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the environmental baseline (*e.g.,* as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, and specific consideration of take by serious injury/mortality previously authorized for other NMFS research activities).

Serious Injury and Mortality

NMFS is proposing to authorize a very small number of serious injuries or mortalities that could occur incidental to ice roads and ice trails construction and maintenance.

NMFS considers many factors, when available, in making a negligible impact determination, including, but not limited to, the status of the species or stock relative to the optimum sustainable population (OSP) level (if known), whether the recruitment rate for the species or stock is increasing, decreasing, stable, or unknown, the size and distribution of the population, and existing impacts and environmental conditions. The potential biological removal (PBR) metric can help inform the potential effects of serious injury and mortality caused by activities authorized under 101(a)(5)(A) on marine mammal stocks.

PBR is defined in the MMPA (16 U.S.C. 1362(20)) as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population, and is a measure to be considered when evaluating the effects of serious injury and mortality on a marine mammal species or stock. Optimum sustainable population (OSP) is defined by the MMPA (16 U.S.C. 1362(9)) as the number of animals which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element. PBR values are calculated by NMFS as the level of annual removal from a stock that will allow that stock to equilibrate within OSP at least 95 percent of the time.

To specifically use PBR, along with other factors, to evaluate the effects of serious injury and mortality, we first calculate a metric that incorporates information regarding ongoing anthropogenic serious injury and mortality into the PBR value (*i.e.,* PBR minus the total annual anthropogenic mortality/serious injury estimate), which is called ''residual PBR''. We then consider how the anticipated potential incidental serious injury and mortality from the activities being evaluated compares to residual PBR. Anticipated or potential serious injury and mortality that exceeds residual PBR is considered to have a higher likelihood of adversely affecting rates of recruitment or survival, while anticipated serious injury and mortality that is equal to or less than residual PBR has a lower likelihood (both examples given without consideration of other types of take, which also factor into a negligible impact determination). For a species or stock with incidental serious injury and mortality less than 10 percent of residual PBR, we consider serious injury and mortality from the specified activities to represent an insignificant incremental increase in ongoing anthropogenic serious injury and mortality that alone (*i.e.,* in the absence of any other take) cannot affect annual rates of recruitment and survival.

Regarding the impacts of the specified activities analyzed here, a stock-wide PBR for ringed seals is unknown; however, Muto *et al.* (2018) estimate PBR for ringed seals in the Bearing Sea alone to be 5,100 seals. Total annual mortality and serious injury is 1,054 for a residual PBR (r-PBR) of 4,046, which means that the 10 percent insignificance threshold is 405 seals. Currently there is one authorized MMPA incidental take authorization authorizing takes of serious injury/mortality of ringed seals as a result of NMFS Alaska Fisheries Science Center fisheries research activities in the Arctic (84 FR 46788; September 5, 2019). This authorization authorizes up to 4 mortalities annually over the 5-year regulation. In the case of the Hilcorp-Eni ice roads and ice trails construction, the authorized taking, by serious injury and mortality, of 12 ringed seals over the course of 5 years, equates to an average of less than 4 seals serious injury/mortality annually. This number is far less than the 10 percent r-PBR of 405 seals, when considering mortality and serious injuring caused by other anthropogenic sources. This amount of take, by mortality and serious injury, is considered insignificant and therefore supports our negligible impact finding.

Harassment

Hilcorp and Eni requested, and NMFS proposes, to authorize take, by Level B harassment of ringed seals. The amount

of taking proposed to be authorized is low compared to marine mammal abundance. Potential impacts of Hilcorp-Eni's proposed ice roads and ice trails construction activities are mostly from behavioral disturbances due to exposure to machinery and human activity. The potential effect of the Level B harassment is expected to be localized and brief. The construction crew would be required to closely monitor ringed seals in the vicinity of the project activity and to make sure that potential impacts are within the levels that are analyzed.

In summary and as described above, the following factors primarily support our preliminary determination that the impacts resulting from this activity are not expected to adversely affect the species or stock through effects on annual rates of recruitment or survival:

- Only 12 ringed seals are authorized to be taken by serious injury/mortality over 5 years; *i.e.,* less than 0.1 percent of residual PBR (considering only a partial abundance estimate);
- No injury by permanent hearing threshold shift is expected;
- The only harassment is Level B harassment in the form of brief and localized behavioral disturbance and avoidance;
- The amount of takes, by harassment, is low compared to population sizes; a
- Critical behaviors such as lairing and pupping by ringed seals would be avoided and minimized through implementation of ice road Best Management Plans;
- No long lasting modification in marine mammal habitat; and
- Ice roads/trails construction and maintenance would only occur between December and May each year.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed monitoring and mitigation measures, NMFS preliminarily finds that the total marine mammal take from the proposed activity will have a negligible impact on all affected marine mammal species or stocks.

Small Numbers

As noted above, only small numbers of incidental take may be authorized under Section 101(a)(5)(A) of the MMPA for specified activities. The MMPA does not define small numbers and so, in practice, where estimated numbers are available, NMFS compares the number of individuals taken to the most appropriate estimation of abundance of the relevant species or stock in our determination of whether an authorization is limited to small numbers of marine mammals. Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities.

The amount of total taking (*i.e.,* Level B harassment and serious injury/mortality) of ringed seal each year is less than one percent of the population (Table 12).

TABLE 7—AMOUNT OF PROPOSED RINGED SEAL AUTHORIZED TAKE RELATIVE TO POPULATION ESTIMATES (N_{best})

Species	Stock	Population estimate	Total take	Percent of population
Ringed seal	Alaska	170,000	27	<1

Based on the analysis contained herein of the proposed activity (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS preliminarily finds that small numbers of marine mammals will be taken relative to the population sizes of the affected species or stocks.

Impact on Availability of Affected Species for Taking for Subsistence Uses

In order to issue an IHA, NMFS must find that the specified activity will not have an ''unmitigable adverse impact'' on the subsistence uses of the affected marine mammal species or stocks by Alaskan Natives. NMFS has defined ''unmitigable adverse impact'' in 50 CFR 216.103 as an impact resulting from the specified activity: (1) That is likely to reduce the availability of the species to a level insufficient for a harvest to meet subsistence needs by: (i) Causing the marine mammals to abandon or avoid hunting areas; (ii) Directly displacing subsistence users; or (iii) Placing physical barriers between the marine mammals and the subsistence hunters; and (2) That cannot be sufficiently mitigated by other measures to increase the availability of marine mammals to allow subsistence needs to be met.

As described in the Marine Mammal section of the document, ringed seal is one of the key subsistence species that is being harvested by native subsistence users. However, the proposed ice roads/trails construction and maintenance would occur far from any subsistence activities and would be separated temporarily from subsistence activities. In addition, Hilcorp and Eni have proposed and NMFS has included several mitigation measures to address potential impacts on the availability of marine mammals for subsistence use. In addition, both Hilcorp and Eni have developed Plans of Cooperation and worked with subsistence use communities in the vicinity of the project areas. Hilcorp and Eni further indicate that they will sign a Conflict Avoidance Agreement to ensure that there will be no unmitigable impact on subsistence uses of marine mammals during the proposed ice roads and ice trails construction and maintenance.

Based on the description of the specified activity, the measures described to minimize adverse effects on the availability of marine mammals for subsistence purposes, and the proposed mitigation and monitoring measures, NMFS has preliminarily determined that there will not be an unmitigable adverse impact on subsistence uses from Hilcorp and Eni's proposed activities.

Adaptive Management

The regulations governing the take of marine mammals incidental to Hilcorp and Eni's ice roads/trails construction and maintenance activities would contain an adaptive management component.

The reporting requirements associated with this proposed rule are designed to provide NMFS with monitoring data from the previous year to allow consideration of whether any changes are appropriate. The use of adaptive management allows NMFS to consider new information from different sources to determine (with input from Hilcorp and Eni regarding practicability) on an annual or biennial basis if mitigation or monitoring measures should be modified (including additions or deletions). Mitigation measures could be modified if new data suggests that such modifications would have a reasonable likelihood of reducing adverse effects to marine mammals and if the measures are practicable.

The following are some of the possible sources of applicable data to be considered through the adaptive

management process: (1) Results from monitoring reports, as required by MMPA authorizations; (2) results from general marine mammal and sound research; and (3) any information which reveals that marine mammals may have been taken in a manner, extent, or number not authorized by these regulations or subsequent LOAs.

Endangered Species Act (ESA)

Section 7(a)(2) of the Endangered Species Act of 1973 (ESA: 16 U.S.C. 1531 *et seq.*) requires that each Federal agency insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. To ensure ESA compliance for the issuance of IHAs, NMFS consults internally, in this case with the Alaska Region Protected Resources Division, whenever we propose to authorize take for endangered or threatened species.

NMFS is proposing to authorize take of Alaska stock of ringed seal, which is listed under the ESA.

The Permit and Conservation Division has requested initiation of Section 7 consultation with the NMFS Alaska Region Protected Resources Division for the issuance of the LOAs. NMFS will conclude the ESA consultation prior to reaching a determination regarding the proposed issuance of the authorizations.

Request for Information

NMFS requests interested persons to submit comments, information, and suggestions concerning Hilcorp and Eni's request and the proposed regulations (see **ADDRESSES**). All comments will be reviewed and evaluated as we prepare a final rule and make final determinations on whether to issue the requested authorizations. This proposed rule and referenced documents provide all environmental information relating to our proposed action for public review.

Classification

Pursuant to the procedures established to implement Executive Order 12866, the Office of Management and Budget has determined that this proposed rule is not significant.

Pursuant to section 605(b) of the Regulatory Flexibility Act (RFA), the Chief Counsel for Regulation of the Department of Commerce has certified to the Chief Counsel for Advocacy of the Small Business Administration that this proposed rule, if adopted, would not have a significant economic impact on a substantial number of small entities. Hilcorp and Eni are the sole entities that would be subject to the requirements in these proposed regulations, and Hilcorp and Eni are not small governmental jurisdictions, small organizations, or small businesses, as defined by the RFA. Both companies are global entities. Because of this certification, a regulatory flexibility analysis is not required and none has been prepared.

Notwithstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act (PRA) unless that collection of information displays a currently valid OMB control number. This proposed rule contains collection-of-information requirements subject to the provisions of the PRA. These requirements have been approved by OMB under control number 0648–0151 and include applications for regulations, subsequent LOAs, and reports.

List of Subjects in 50 CFR Part 217

Administrative practice and procedure, Alaska, Endangered and threatened species, Indians, Marine mammals, Oil and gas exploration, Reporting and recordkeeping requirements, Wildlife.

Dated: January 6, 2020.

Samuel D. Rauch III,

Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

For reasons set forth in the preamble, 50 CFR part 217 is proposed to be amended as follows:

PART 217—REGULATIONS GOVERNING THE TAKE OF MARINE MAMMALS INCIDENTAL TO SPECIFIED ACTIVITIES

■ 1. The authority citation for part 217 continues to read as follows:

Authority: 16 U.S.C. 1361 *et seq.*, unless otherwise noted.

■ 2. Add subpart P to read as follows:

Subpart P—Taking Marine Mammals Incidental to Ice Roads and Ice Trails Construction and Maintenance on Alaska's North Slope

Sec.

Subpart P—Taking Marine Mammals Incidental to Ice Roads and Ice Trails Construction and Maintenance on Alaska's North Slope

§ 217.150 Specified activity and specified geographical region.

(a) Regulations in this subpart apply only to Hilcorp Alaska, LLC (Hilcorp) and Eni US Operating Co. Inc. (Eni) and those persons they authorize or fund to conduct activities on their behalf for the taking of marine mammals that occurs in the areas outlined in paragraph (b) of this section and that occurs incidental to construction and maintenance of ice roads and ice trails.

(b) The taking of marine mammals by Hilcorp and Eni may be authorized in two Letters of Authorization (LOAs) only if it occurs on Alaska's North Slope.

§ 217.151 Effective dates.

Regulations in this subpart are effective from [EFFECTIVE DATE OF FINAL RULE] through [DATE 5 YEARS AFTER EFFECTIVE DATE OF FINAL RULE].

§ 217.152 Permissible methods of taking.

Under LOAs issued pursuant to §§ 216.106 of this chapter and 217.156, the Holders of the LOAs (hereinafter ''Hilcorp'' and ''Eni'') may incidentally, but not intentionally, take marine mammals within the area described in § 217.150(b) by mortality, serious injury, Level A harassment, or Level B harassment associated with ice road and ice trail construction and maintenance activities, provided the activities are in compliance with all terms, conditions, and requirements of the regulations in this subpart and the appropriate LOAs.

§ 217.153 Prohibitions.

Notwithstanding takings contemplated in § 217.152 and authorized by the LOAs issued under §§ 216.106 of this chapter and 217.156, no person in connection with the activities described in § 217.150 may:

(a) Violate, or fail to comply with, the terms, conditions, and requirements of this subpart or an LOA issued under §§ 216.106 of this chapter and 217.156;

(b) Take any marine mammal not specified in such LOAs;

(c) Take any marine mammal specified in such LOAs in any manner other than as specified;

(d) Take a marine mammal specified in such LOAs if NMFS determines such taking results in more than a negligible impact on the species or stocks of such marine mammal; or

(e) Take a marine mammal specified in such LOAs if NMFS determines such taking results in an unmitigable adverse impact on the species or stock of such marine mammal for taking for subsistence uses.

§ 217.154 Mitigation requirements.

When conducting the activities identified in § 217.150(a), the mitigation measures contained in any LOA issued under §§ 216.106 of this chapter and 217.156 must be implemented. These mitigation measures shall include but are not limited to:

(a) *General conditions.* (1) Hilcorp and Eni must renew, on an annual basis, the Plans of Cooperation (POCs), throughout the life of the regulations;

(2) Copies of any issued LOAs must be in the possession of Hilcorp and Eni, their designees, and work crew personnel operating under the authority of the issued LOAs;

(3) Prior to initiation of sea ice road- and ice trail-related activities, project personnel associated with ice road construction, maintenance, use or decommissioning must receive annual training on implementing mitigation and monitoring measures;

(i) Personnel must be advised that interactions with, or approaching, any wildlife is prohibited;

(ii) Annual training must also include reviewing Hilcorp and Eni's Wildlife Management Plan; and

(iii) In addition to the mitigation and monitoring plans, other topics in the training must include:

(A) Ringed seal identification and brief life history;

(B) Physical environment (habitat characteristics and how to potentially identify habitat); (C) Ringed seal use in the ice road region (timing, location, habitat use, birthing lairs, breathing holes, basking, etc.);

(D) Potential effects of disturbance; and

(E) Importance of lairs, breathing holes and basking to ringed seals

(b) *General mitigation measures throughout the Ice Road/Trail Season* (*December through May*). (1) Ice road/trail speed limits must be no greater than 45 miles per hour (mph); speed limits must be determined on a case-by-case basis based on environmental, road conditions and ice road/trail longevity considerations;

(2) Following existing safety measures, delineators must mark the roadway in a minimum of ¼-mile increments on both sides of the ice road to delineate the path of vehicle travel and areas of planned on-ice activities (*e.g.,* emergency response exercises). Following existing safety measures currently used for ice trails, delineators must mark one side of an ice trail a minimum of every ¼ mile. Delineators must be color-coded, following existing safety protocol, to indicate the direction of travel and location of the ice road or trail;

(3) Corners of rig mats, steel plates, and other materials used to bridge sections of hazardous ice, must be clearly marked or mapped using GPS coordinates of the locations;

(4) Personnel must be instructed to remain in the vehicle and safely continue, if they encounter a ringed seal while driving on the road;

(c) *Additional mitigation measures after March 1st.* In addition to the general mitigation measures listed in § 217.154(b), the following measures must also be implemented after March 1st:

(1) Ice road/trail construction, maintenance and decommissioning must be performed within the boundaries of the road/trail and shoulders, with most work occurring within the driving lane. To the extent practicable and when safety of personnel is ensured, equipment must travel within the driving lane and shoulder areas.

(2) Blading and snow blowing of ice roads must be limited to the previously disturbed ice road/shoulder areas to the extent safe and practicable. Snow must be plowed or blown from the ice road surface.

(3) In the event snow is accumulating on a road within a 150-ft radius of an identified downwind seal or seal lair, operational measures must be used to avoid seal impacts, such as pushing snow further down the road before blowing it off the roadway. Vehicles must not stop within 150 ft of identified seals or within 500 ft of known seal lairs.

(4) To the extent practicable and when safety of personnel is ensured, tracked vehicle operation must be limited to the previously disturbed ice trail areas. When safety requires a new ice trail to be constructed after March 1st, construction activities such as drilling holes in the ice to determine ice quality and thickness, must be conducted only during daylight hours with good visibility.

(5) Ringed seal structures must be avoided by a minimum of 150 ft during ice testing and new trail construction.

(6) Once the new ice trail is established, tracked vehicle operation must be limited to the disturbed area to the extent practicable and when safety of personnel is ensured.

(7) If a seal is observed on ice within 150 ft of the centerline of the ice road/trail, the following mitigation measures must be implemented:

(i) Construction, maintenance or decommissioning activities associated with ice roads and trails must not occur within 150 ft of the observed ringed seal, but may proceed as soon as the ringed seal, of its own accord, moves farther than 150 ft distance away from the activities or has not been observed within that area for at least 24 hours; and

(ii) Transport vehicles (*i.e.,* vehicles not associated with construction, maintenance or decommissioning) may continue their route within the designated road/trail without stopping.

§ 217.155 Requirements for monitoring and reporting.

(a) All marine mammal monitoring must be conducted in accordance with Hilcorp and Eni's Marine Mammal Mitigation and Monitoring Plan (4MP). This plan may be modified throughout the life of the regulations upon NMFS review and approval.

(b) General monitoring measures will be implemented through the entire ice road/trail season including during construction, maintenance, use and decommissioning.

(1) If a ringed seal is observed within 150 ft of the center of an ice road or trail, the operator's Environmental Specialist must be immediately notified with the information provided in paragraph (d) of this section.

(i) The Environmental Specialist must relay the seal sighting location information to all ice road personnel and the company's office personnel responsible for wildlife interaction, following notification protocols described in the company-specific Wildlife Management Plan. All other data will be recorded and logged.

(ii) The Environmental Specialist or designated person must monitor the ringed seal to document the animal's location relative to the road/trail. All work that is occurring when the ringed seal is observed and the behavior of the seal during those activities must be documented until the animal is at least 150 ft away from the center of the road/trail or is no longer observed.

(2) [Reserved]

(c) Monitoring measures that begin after March 1st.

(1) In addition to the general monitoring measures listed in § 217.155(b), the following measures must also be implemented after March 1st:

(i) If an ice road or trail is being actively used, under daylight conditions with good visibility, a dedicated observer (not the vehicle operator) must

conduct a survey along the sea ice road/trail to observe if any ringed seals are within 500 ft of the roadway corridor. The following survey protocol must be implemented:

(A) Surveys must be conducted every other day during daylight hours;

(B) Observers for ice road activities must have received the training described in § 217.154(a) and understand the applicable sections of the Wildlife Interaction Plan;

(C) Observers for ice road activities must be capable of detecting, observing and monitoring ringed seal presence and behaviors, and accurately and completely recording data;

(D) Observers must have no other primary duty than to watch for and report observations related to ringed seals during this survey;

(E) If weather conditions become unsafe, the observer may be removed from the monitoring activity;

(ii) If a ringed seal structure (*i.e.,* breathing hole or lair) is observed within 150 ft of the ice road/trail, the location of the structure must be reported to the Environmental Specialist and:

(A) An observer must monitor the structure every six hours on the day of the initial sighting to determine whether a ringed seal is present.

(B) Monitoring for the seal must occur every other day the ice road is being used unless it is determined the structure is not actively being used (*i.e.,* a seal is not sighted at that location during monitoring).

(d) Reporting requirement at the end-of-season.

(1) A final end-of-season report compiling all ringed seal observations must be submitted to NMFS Office of Protected Resources within 90 days of decommissioning the ice road/trail. The report must include:

(i) Date, time, location of observation;

(ii) Ringed seal characteristics (*i.e.,* adult or pup, behavior (avoidance, resting, etc.));

(iii) Activities occurring during observation including equipment being used and its purpose, and approximate distance to ringed seal(s);

(iv) Actions taken to mitigate effects of interaction emphasizing:

(A) Which mitigation and/or monitoring measures were successful;

(B) Which mitigation and/or monitoring measures may need to be improved to reduce interactions with ringed seals;

(C) The effectiveness and practicality of implementing mitigation and monitoring measures;

(D) Any issues or concerns regarding implementation of mitigation and/or monitoring measures; and

(E) Potential effects of interactions based on observation data; and

(v) Proposed updates (if any) to Wildlife Interaction Plan(s) or Mitigation and Monitoring Measures.

(2) In the event a seal is killed or seriously injured by ice road/trail activities, Hilcorp or Eni must immediately cease the specified activities and report the incident to the NMFS Office of Protected Resources (301–427–8401) and Alaska Region Stranding Coordinator (877–925–7773). The report must include the following information:

(i) Time and date of the incident;

(ii) Description of the incident;

(iii) Environmental conditions (*e.g.,* cloud over, and visibility);

(iv) Description of all marine mammal observations in the 24 hours preceding the incident;

(v) Species identification or description of the animal(s) involved;

(vi) Fate of the animal(s); and

(vii) Photographs or video footage of the animal(s).

(3) In the event ice road/trail personnel discover a dead or injured seal but the cause of injury or death is unknown or believed not to be related to ice road/trail activities, Hilcorp or Eni must report the incident to the NMFS Office of Protected Resources (301–427–8401) and Alaska Region Stranding Coordinator (877–925–7773) within 48 hours of discovery.

§ 217.156 Letters of Authorization.

(a) To incidentally take marine mammals pursuant to these regulations, Hilcorp and Eni must apply for and obtain an LOA.

(b) An LOA, unless suspended or revoked, may be effective for a period of time not to exceed the expiration date of these regulations.

(c) If an LOA expires prior to the expiration date of these regulations, Hilcorp or Eni may apply for and obtain a renewal of the LOA.

(d) In the event of projected changes to the activity or to mitigation and monitoring measures required by an LOA, Hilcorp and Eni must apply for and obtain a modification of the LOA as described in § 217.57.

(e) The LOAs shall set forth:

(1) Permissible methods of incidental taking;

(2) Means of effecting the least practicable adverse impact (*i.e.,* mitigation) on the species, its habitat, and on the availability of the species for subsistence uses; and

(3) Requirements for monitoring and reporting.

(f) Issuance of the LOAs shall be based on a determination that the level of taking will be consistent with the findings made for the total taking allowable under these regulations.

(g) Notice of issuance or denial of an LOA shall be published in the **Federal Register** within thirty days of a determination.

§ 217.157 Renewals and modifications of Letters of Authorization.

(a) An LOA issued under §§ 216.106 of this chapter and 217.156 for the activity identified in § 217.150(a) shall be renewed or modified upon request by the applicant, provided that:

(1) The proposed specified activity and mitigation, monitoring, and reporting measures, as well as the anticipated impacts, are the same as those described and analyzed for these regulations (excluding changes made pursuant to the adaptive management provision in paragraph (c)(1) of this section); and

(2) NMFS determines that the mitigation, monitoring, and reporting measures required by the previous LOAs under these regulations were implemented.

(b) For LOAs modification or renewal requests by the applicants that include changes to the activity or the mitigation, monitoring, or reporting (excluding changes made pursuant to the adaptive management provision in paragraph (c)(1) of this section) that do not change the findings made for the regulations or result in no more than a minor change in the total estimated number of takes (or distribution by species or years), NMFS may publish a notice of proposed LOAs in the **Federal Register**, including the associated analysis of the change, and solicit public comment before issuing the LOA.

(c) The LOAs issued under §§ 216.106 of this chapter and 217.156 for the activity identified in § 217.150(a) may be modified by NMFS under the following circumstances:

(1) *Adaptive management.* NMFS may modify (including augment) the existing mitigation, monitoring, or reporting measures (after consulting with Hilcorp or Eni regarding the practicability of the modifications) if doing so creates a reasonable likelihood of more effectively accomplishing the goals of the mitigation and monitoring set forth in the preamble for these regulations.

(i) Possible sources of data that could contribute to the decision to modify the mitigation, monitoring, or reporting measures in an LOA:

(A) Results from Hilcorp or Eni's monitoring from the previous year(s).

(B) Results from other marine mammal and/or sound research or studies.

(C) Any information that reveals marine mammals may have been taken in a manner, extent or number not authorized by these regulations or subsequent LOAs.

(ii) If, through adaptive management, the modifications to the mitigation, monitoring, or reporting measures are substantial, NMFS will publish a notice of proposed LOA in the **Federal Register** and solicit public comment.

(2) *Emergencies.* If NMFS determines that an emergency exists that poses a significant risk to the well-being of the species or stocks of marine mammals specified in LOAs issued pursuant to §§ 216.106 of this chapter and 217.156, an LOA may be modified without prior notice or opportunity for public comment. Notice would be published in the **Federal Register** within thirty days of the action.

§§ 217.158—217.159 [Reserved]

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